CHICAGO BOOTH

CRSP®
Center for Research in Security Prices

CRSPSift USER GUIDE

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CHICAGO BOOTH

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CONTENTS

CHAPTER 1: INTRODUCTION 1

CHAPTER 2: INSTALLATION AND SETUP 2

INSTALLING CRSPSIFT 2

LAUNCHING CRSPSIFT FOR THE FIRST TIME 3

CHAPTER 3: TSQUERY: TIME SERIES ACCESS 6

ENTITIES 6

DATA ITEMS 9

DATE 14

LAYOUT 16

DIRECT EDIT 18

EXECUTING A QUERY 18

CHAPTER 4: STKQUERY: STOCK DATA ACCESS 19

SECURITY SELECTION 19

HEADER IDENTIFICATION 20

DATA ITEMS 20

GLOBAL OPTIONS 21

DATA GROUPS 22

PORTFOLIOS 23

OUTPUT OPTIONS 23

CHAPTER 5: INDQUERY: INDEX DATA ACCESS 26

INDEX SELECTION 26

HEADER IDENTIFICATION 27

TIME SERIES DATA 27

PORTFOLIO GROUP OPTIONS 27

OUTPUT OPTIONS 28

CHAPTER 6: CCMQUERY: CRSP/COMPUSTAT MERGED DATABASE ACCESS 30

THE CCMQUERY TOOLBAR 30

COMPANY SELECTION 30

DATA ITEMS AND GROUPS 31

CHAPTER 7: TRSQUERY: TREASURIES DATA ACCESS 36

QUERY DATE RANGE SPECIFICATION 36

TREASURY SELECTION 36

DATA ITEM SELECTION 38

DATA GROUPS 39

OUTPUT OPTIONS 40

CHAPTER 8: RIQUERY: RESEARCH INDEX DATA ACCESS 42

SECURITY SELECTION 42

DATA ITEMS 43

DATA GROUPS 47

OUTPUT OPTIONS 47

CHAPTER 9: MUTQUERY: US SURVIVOR-BIAS-FREE MUTUAL FUND DATABASE ACCESS 50

SECURITY SELECTION 50

DATA ITEMS 51

DATA GROUPS 52

OUTPUT OPTIONS 53

OUTPUT FILE SUFFIXES 54

CHAPTER 10: TOOLS 55

CALENDAR FILE WIZARD 55

REFERENCE DATA 56

CHAPTER 11: CRSPSIFT OPTIONS 58

CRSPSIFT OPTIONS - ENVIRONMENT SCANNER 58

CRSPSIFT OPTIONS - SERVICES 60

CRSPSIFT OPTIONS - QUERY QUEUE 60

CHAPTER 1: INTRODUCTION

CRSPSift, CRSP's Securities Information Filtering Tool, lets you extract data from your Stock & Index, CRSP/ Compustat Merged, US Treasury, Mutual Fund, and new Research Index databases. In addition to an updated interface, CRSPSift offers many features designed to make accessing CRSP databases easier. Some of these features include:

- **Data Environments:** Create a data environment for each set of data you use. To use a different data set, simply select its environment from a menu and rerun your query.
- **Multiple Queries:** Edit and run up to ten queries simultaneously.
- **Direct Edit:** Type or paste an existing request file from a command-line utility into a window and then save it as a CRSPSift query. CRSPSift automatically updates its graphical interface to reflect your query options.
- **Output Layout Preview:** TsQuery features an animated report preview that suggests how your output will look. This saves you the time of running a query multiple times to find the right format.
- **Company Selection:** A company lookup utility. Search and sort results by Company Name, PERMNO, ticker symbol, or other identifier.
- **Filtering Options:** A point-and-click interface to simplify filtering query results by exchange, share type, NASDAQ Market Tiers, portfolio assignments, SIC Code, or group membership.

CRSPSIFT UTILITIES

TsQuery is a tool for extracting time-series data – based in fixed and relative ranges – for the CRSP security universe, CRSP Indexes, and CRSP/Compustat linked companies (for Compustat subscribers).

StkQuery is an access tool for CRSP security data. Use it to extract event histories for name and identifier changes, distributions, delisting. It can also perform time-series extractions.

IndQuery is an access tool for CRSP Indexes included in the CRSP US Stock or Stock & Index Databases.

CCMQuery enables you to access all Compustat data from the CRSP/Compustat Merged Database link history data by using Compustat's GVKEY and IID identifiers.

TrsQuery is a tool for accessing CRSP Daily and Monthly US Treasury Databases.

MutQuery provides access to the CRSP Mutual Funds database containing fund and holdings data items.

RIQuery introduces CRSP's Research Index database built upon CRSP's new investable index series and containing new intra-day data items.

CRSPSIFT MINIMUM SYSTEM REQUIREMENTS FOR THE PROFESSIONAL EDITION

- Microsoft Windows XP Professional SP3 or Windows 7 32- and 64-bit
- Display resolution of 1024 x 768 or higher
- Powershell 1.0 for Windows XP. Windows 7 comes prepackaged with Powershell.
- Adobe Flash Player 11

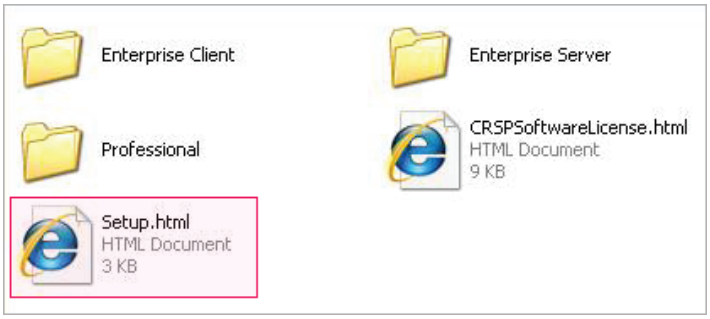
Note: CRSP recommends using CRSPSift Professional with a local system account, on databases installed locally.

CHAPTER 2: INSTALLATION AND SETUP

This chapter shows you how to install the CRSPSift software on your computer and describes the configuration options available when you launch it for the first time.

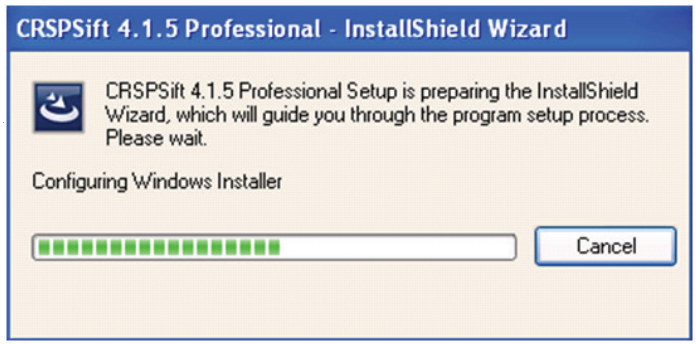
INSTALLING CRSPSIFT

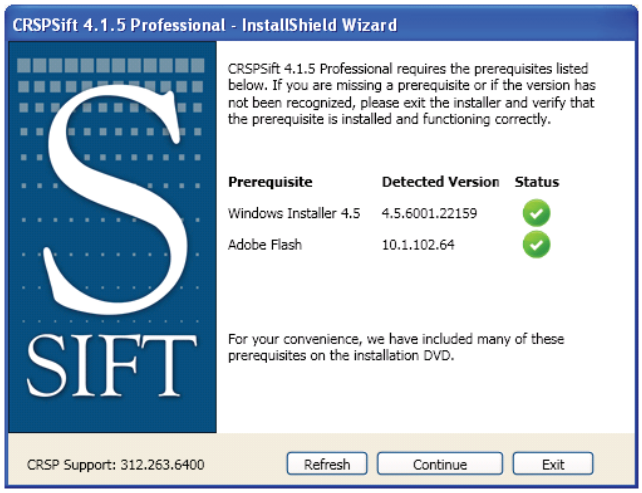
To install CRSPSift, insert the installation disc into your computer's DVD drive and navigate to it in Windows Explorer. Double click the file **setup.html** to open it in your web browser



After reading the installation terms contained in the document, proceed to the section titled **Go To An Installer** and click the **Install Professional Edition - XP SP3 and Windows 7 Only** link to launch the installer program.

Note: Installers for prerequisite software are included on the CRSPSift installation disc.

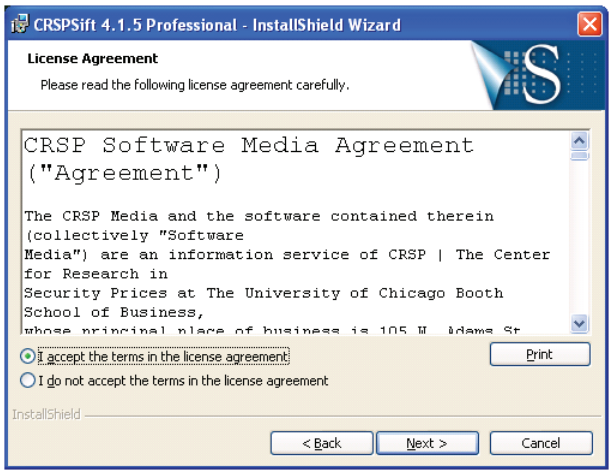

CRSPSift 4.1.5 Professional - InstallShield Wizard
CRSPSift 4.1.5 Professional Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Configuring Windows Installer
Cancel


CRSPSift 4.1.5 Professional - InstallShield Wizard
CRSPSift 4.1.5 Professional requires the prerequisites listed below. If you are missing a prerequisite or if the version has not been recognized, please exit the installer and verify that the prerequisite is installed and functioning correctly.
Prerequisite
Detected Version
Status
Windows Installer 4.5
4.5.6001.22159
Adobe Flash
10.1.102.64
For your convenience, we have included many of these prerequisites on the installation DVD.
CRSP Support: 312.263.6400
Refresh
Continue
Exit

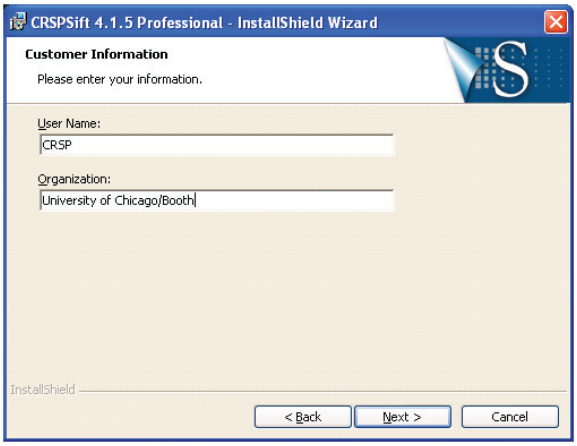
To begin installation, click the Next button.

CRSPSift 4.1.5 Professional - InstallShield Wizard
Welcome to the InstallShield Wizard for CRSPSift 4.1.5 Professional
The InstallShield(R) Wizard will install CRSPSift 4.1.5 Professional on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

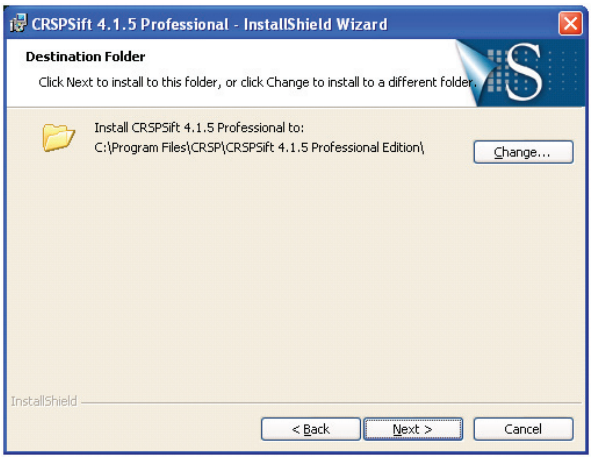
Read the License Agreement. To continue installation, click the radio button labeled "I accept the terms in the license agreement," and then click Next.


CRSPSift 4.1.5 Professional - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
CRSP Software Media Agreement ("Agreement")
The CRSP Media and the software contained therein (collectively "Software Media") are an information service of CRSP | The Center for Research in Security Prices at The University of Chicago Booth School of Business,
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

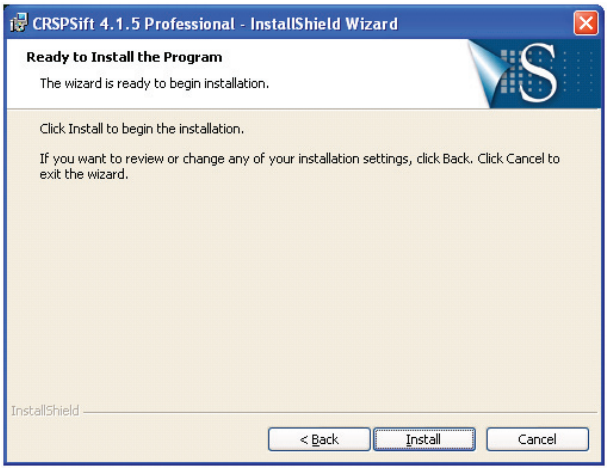
Enter your name and the name of your organization on the Customer Information screen, and then click Next.



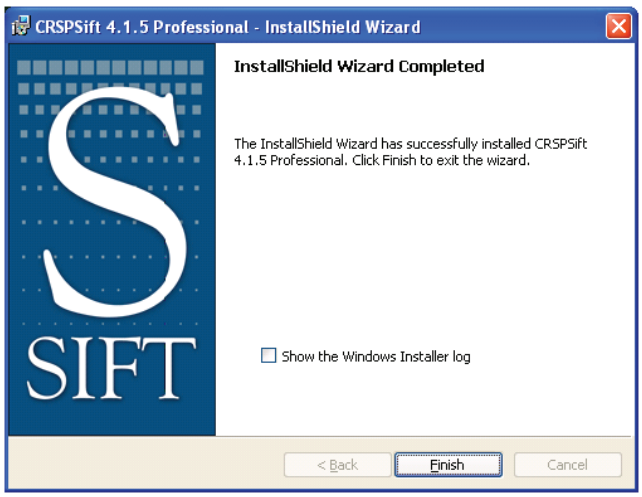
Now choose the destination folder where CRSPSift will be installed on your computer. If you would like to install it to a location other than the default, click the Change button and navigate to the folder of your choice. When you have selected a destination folder, click the Next button.


CRSPSift 4.1.5 Professional - InstallShield Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
Install CRSPSift 4.1.5 Professional to:
C:\Program Files\CRSP\CRSPSift 4.1.5 Professional Edition\
Change...
InstallShield
< Back
Next >
Cancel

The InstallShield Wizard is now ready to install the program. Click the Install button to begin.


CRSPSift 4.1.5 Professional - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

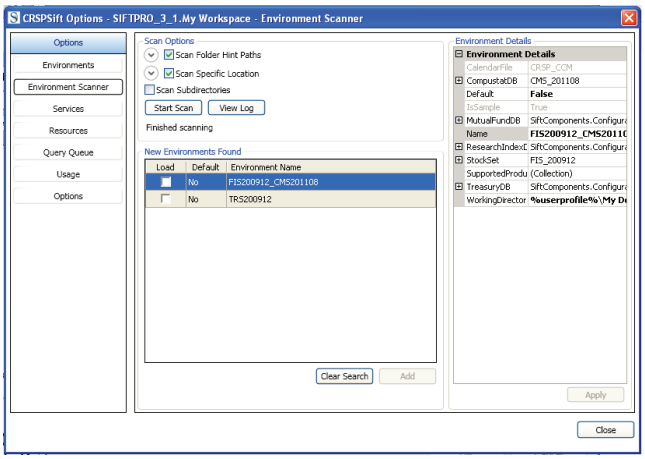
Click the Finish button to exit the InstallShield Wizard.


CRSPSift 4.1.5 Professional - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed CRSPSift 4.1.5 Professional. Click Finish to exit the wizard.
SIFT
Show the Windows Installer log
< Back
Finish
Cancel

LAUNCHING CRSPSIFT FOR THE FIRST TIME

The InstallShield Wizard creates a shortcut to the CRSPSift application on your Desktop. Double-click the shortcut icon to launch CRSPSift.

Before you can use CRSPSift you must tell it the location of your installed CRSP databases. The first time you run the application you are presented with the Environment Startup Scanner.

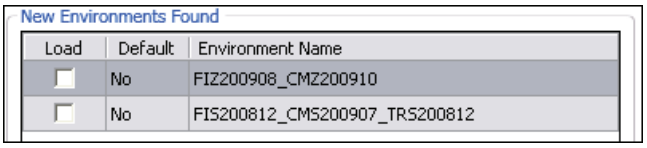


Using this tool you create what are known as data environments. A data environment is a collection of one or more compatible database products.

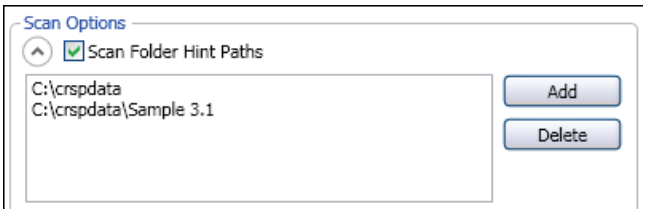
FINDING ENVIRONMENTS

Upon launch, the Environment Startup Scanner automatically searches the default CRSP database installation directory (C:\crspdata). It builds and displays environments for the most recent databases

found.



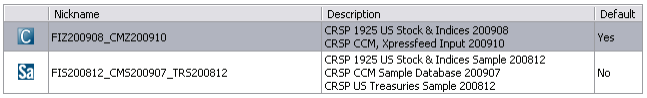
If your CRSP databases are installed in a directory other than the default, click the disclosure triangle next to Scan Folder Hint Paths under Scan Options.



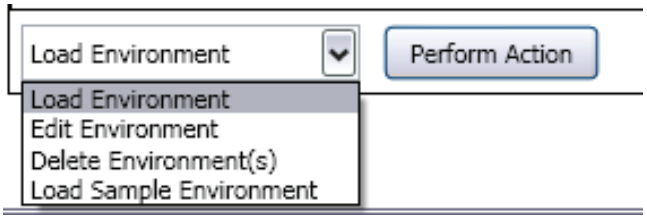
A folder hint path serves as a guide telling the Environment Scanner where to look for CRSP databases. The default locations are already listed. To add your own, click the Add button and navigate to the directory where your CRSP databases are installed. Then click the Start Scan button to scan again with the new directory included.

The Environments screen is where you can manage the environments detected by CRSPSift on its initial launch. To manage your environments, select Options... from the Tools menu to open the CRSPSift Options window. Then click Environments in the list of options categories on the left.

A list of all your saved environments appears in the main area of the screen.



And at the bottom of the screen are controls for managing them. You can edit or delete existing environments, as well as create new ones.



ADDING A NEW ENVIRONMENT

To add a new environment, click the Load Environment button. Provide the environment with a name, and check the Set as Default box if you want this to the the default environment for new queries. All Stock Databases and CRSP/Compustat Merged Databases, for Compustat subscribers, are detected by CRSPSift and will appear in the lists below.

When you select a Stock Database, The Select CRSP/Compustat table below displays Compustat databases compatible with it, if any are installed. Select a database from the list if you wish to include CRSP/Compustat data in your environment. Finally, click the Browse button to select a working directory where input and output files for this environment will be directed. Click the Save button to save the new environment.

Only the environments that reflect the newest data cuts will automatically be displayed. Additional combinations can be created.

EDITING AN EXISTING ENVIRONMENT

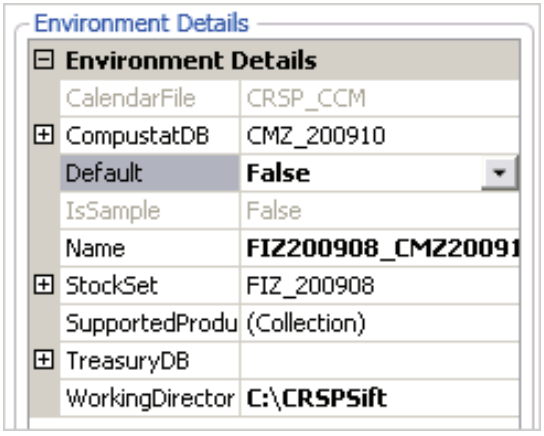
You can also edit an existing environment to change its name and working directory, add or remove Compustat data, or modify the environment's combination of daily and monthly stock databases.

To modify an environment, select it in the environments list and then click the Edit Environment button. The procedure for editing an environment is the same as that for creating a new one. Refer to the discussion above for instructions.

ENVIRONMENT DETAILS

The Environment Details area displays the properties of the environment currently selected in the New Environments Found list. Some of these properties may be changed, including an environment's name, its default status, and the working directory where query output files are saved.

To make an environment the default for new queries, first select its row in the list. Next, in the Environment Details area, click the **False** value next to the **Default** option.



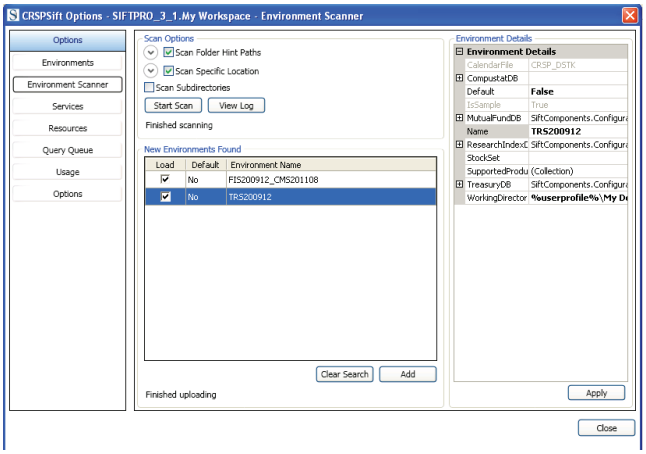
Select **True** to make this environment the default for new queries.

Likewise for the Name and Working Directory properties. Click the value next to the property name and change it to the desired setting.

Note: CRSP provides default environment names that we believe to be intuitive. We encourage you to edit names so that they are meaningful to you for your purposes.

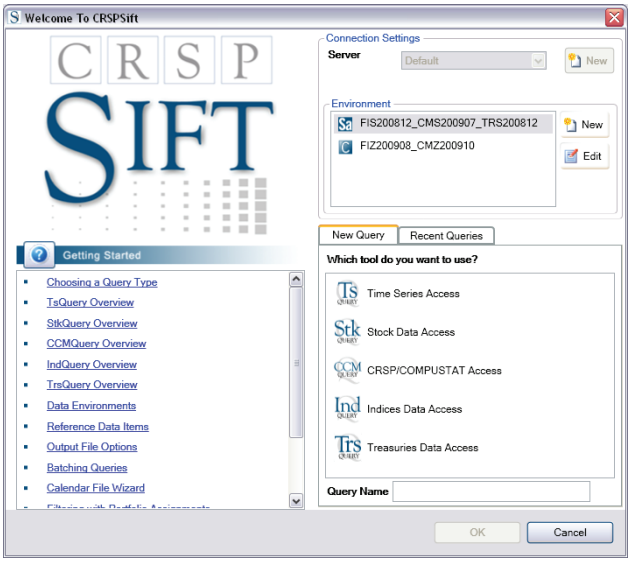
LOADING ENVIRONMENTS

Once installed databases have been scanned and combined into environments, and each environment's properties are set appropriately, you can select which environments you wish to load into CRSPSift.



For each environment you wish to load, click the checkbox in the Load column to the left of its name.

Click the Add button to load the selected environments. When the progress message below the environments list displays "Finished uploading," click the Close button to close the Startup Environment Scanner window. The CRSPSift Welcome screen appears, and you are now ready to begin using CRSPSift query tools.



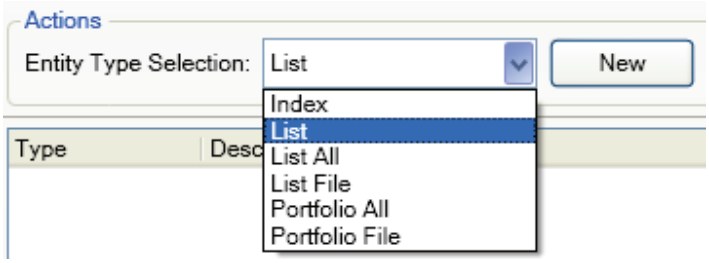
TsQuery is designed to generate output from a combination of database frequencies, and varying types of data into different formats and layouts that serve a range of purposes.

Click the New Query button on the CRSPSift toolbar. Select the Data Environment you wish to use and highlight the TsQuery icon. Optionally give your query a name in the Query Name field, and then click the OK button. You may now fill out the screens required to define your query: entities, data items, date information, and report layout.

ENTITIES

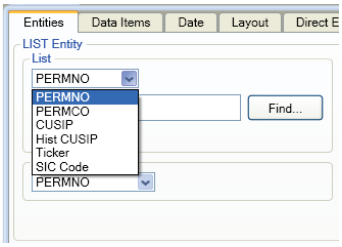
In the Entities screen, you select which securities, indexes, or portfolios your query will use. To add an entity, select an entity type from the drop-down menu and click the New button.

- **List**, the default, is meant for entering a single security, or a small number of securities, manually.
- **List All** calls the full universe of securities in the database selected.
- **List File** accesses securities specified in a user-created input file.
- **Portfolio All** allows the user to create an equal- or value-weighted portfolio from the full universe.
- **Portfolio File** accepts a user-created input file of securities in a portfolio.

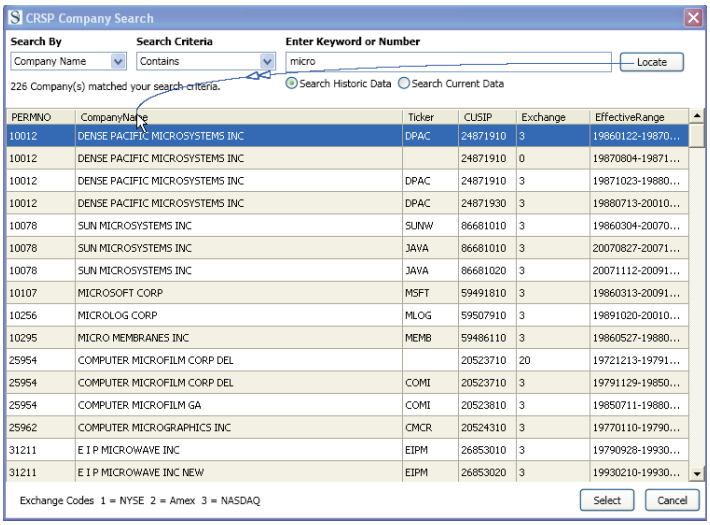


LIST

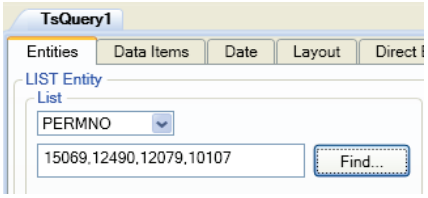
Once the Entity Type Selection is made, a series of options become available. Under List, a menu of identifier keys is available from the drop down menu. Next, identify the issue/issues of interest. If you know the identifier, you may type it in, or you may click on Find... to do a search.



Use the search form to locate a particular company in the CRSP database. Companies matching your search criteria appear in a table, initially sorted by PERMNO. If your search yields many matches, click the column labels to resort the table in the order most useful to you.


CRSP Company Search
Search By
Search Criteria
Enter Keyword or Number
Company Name
Contains
micro
Locate
226 Company(s) matched your search criteria.
Search Historic Data
Search Current Data
PERMNO
CompanyName
Ticker
CUSIP
Exchange
EffectiveRange
10012 DENSE PACIFIC MICROSYSTEMS INC DPAC 24871910 3 19860122-19870...
10012 DENSE PACIFIC MICROSYSTEMS INC 24871910 0 19870804-19871...
10012 DENSE PACIFIC MICROSYSTEMS INC DPAC 24871910 3 19871023-19880...
10012 DENSE PACIFIC MICROSYSTEMS INC DPAC 24871930 3 19880713-20010...
10078 SUN MICROSYSTEMS INC SUNW 86681010 3 19860304-20070...
10078 SUN MICROSYSTEMS INC JAVA 86681010 3 20070827-20071...
10078 SUN MICROSYSTEMS INC JAVA 86681020 3 20071112-20091...
10107 MICROSOFT CORP MSFT 59491810 3 19860313-20091...
10256 MICROLOG CORP MLOG 59507910 3 19891020-20010...
10295 MICRO MEMBRANES INC MEMB 59486110 3 19860527-19880...
25954 COMPUTER MICROFILM CORP DEL 20523710 20 19721213-19791...
25954 COMPUTER MICROFILM CORP DEL COMI 20523710 3 19791129-19850...
25954 COMPUTER MICROFILM GA COMI 20523810 3 19850711-19880...
25962 COMPUTER MICROGRAPHICS INC CMCR 20524310 3 19770110-19790...
31211 E I P MICROWAVE INC EIPM 26853010 3 19790928-19930...
31211 E I P MICROWAVE INC NEW EIPM 26853020 3 19930210-19930...
Exchange Codes 1 = NYSE 2 = Amex 3 = NASDAQ
Select
Cancel

When you have found the company/companies you want, click its row in the table, and then click the Select button. To select more than one company, hold down the Ctrl key while making selections. The PERMNO of that company will appear in the identifier field.

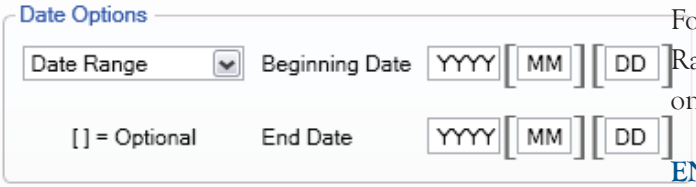


DATE OPTIONS

There are two options on the Entities screen for restricting query output by date: Date Range and Event Date. The Date Options allow you to target date ranges or single dates specific to an entity.

Date Options selected on the Entities screen are further tied to the Date Range option on the Date tab. If Date Range is selected on the Entites tab, a Fixed Date Range must be specified on the Date tab. Likewise, an Event Date must be paired with a Relative Date Range on the Date tab.

Date Range

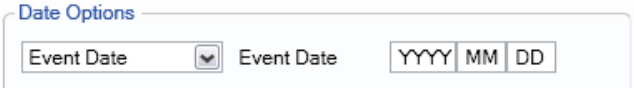


If given, a Date Range must include both beginning and ending dates. Dates may be in YYYYMMDD, YYYYMM, or YYYY format. For formats that do not specify months or days, the beginning date in the range will start with the first period within the specified range. The ending date will be the last period in the range.

For example, the output of a query with Entity Date Range 200605 - 200703 would include daily data from May 1, 2006 through March 31, 2007, or monthly data from May 31, 2006 through March 31, 2007.

The valid query output is the union of the security's trading history, the Date Range specified on the Entities tab, and the Fixed Date Range given on the Date tab. The Entity Date Range must fall within the Fixed Date Range. Note that the Entity Date Range must also exceed the frequency duration of the calendar selected for your output. For example, if your calendar is set to report annually, the Date Range must span more than 12 months.

Event Date



The Entity Event Date specifies a single date in YYYYMMDD. An Entity Event Date must be paired with a Relative Date Range on the Date tab. The Relative Date Range controls the number of calendar periods before and after the Event Date to report in output. Event Date does not work with indexes or portfolios.

For example, suppose you enter an Entity Event Date of 19991231. Next, in the Date tab, you select the Daily calendar and give a Relative Date Range of 2 days before and 2 days after the Entity Event Date. The query output will include data for trading days 19911229 though 19920104, including the event date.

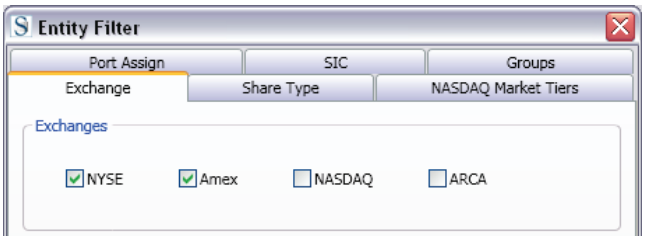
For more information about calendars, Fixed Date Ranges, and Relative Date Ranges, refer to the section on the Date tab below.

ENTITY FILTERS

Several entity filters are available in TsQuery, allowing you to refine your selection of securities by such criteria as stock exchange, share type, and SIC code. These options are available for list and portfolio entity types but will not work with indexes.

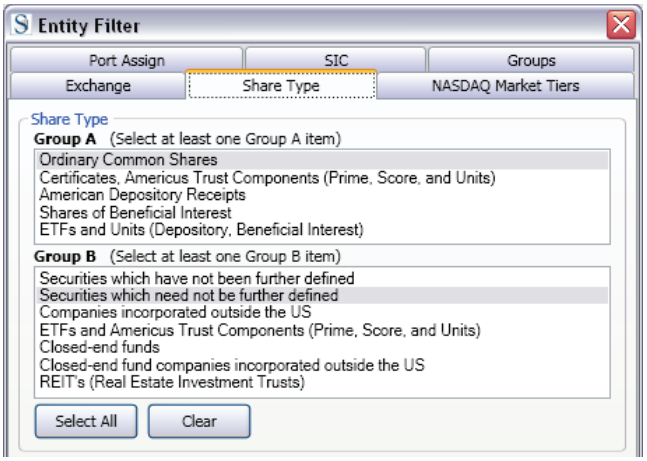
Exchange

The Exchange Filter allows you to filter the trading history of issues on the basis of stock exchange. This option is available only when using the List and Portfolio Entity Types.



Share Type

The Share Type Filter allows you to restrict the output on the basis of share type for individual securities. The selection is based on the CRSP Share Type Code variable.


Entity Filter
Port Assign
SIC
Groups
Exchange
Share Type
NASDAQ Market Tiers
Share Type
Group A (Select at least one Group A item)
Ordinary Common Shares
Certificates, Americus Trust Components (Prime, Score, and Units)
American Depository Receipts
Shares of Beneficial Interest
ETFs and Units (Depository, Beneficial Interest)
Group B (Select at least one Group B item)
Securities which have not been further defined
Securities which need not be further defined
Companies incorporated outside the US
ETFs and Americus Trust Components (Prime, Score, and Units)
Closed-end funds
Closed-end fund companies incorporated outside the US
REIT's (Real Estate Investment Trusts)
Select All
Clear

Select at least one item from both Group A and Group B. Hold the Control button while clicking to select multiple items from a group.

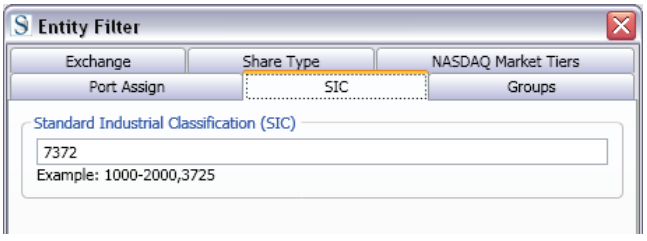
NASDAQ Market Tiers

When the NMSIND option is used, only NASDAQ issue ranges are restricted. The filter has no effect on data from issues trading on other exchanges.

SIC

SIC issue range restriction is applicable to List and Portfolio Entity Types. Each number represents a single SIC Code. You can filter the data to output a range of SIC values or an individual SIC value

For example, 1000-2000,3725 would extract all securities with SIC Codes between 1000 and 2000, and all with and SIC code of 3725.

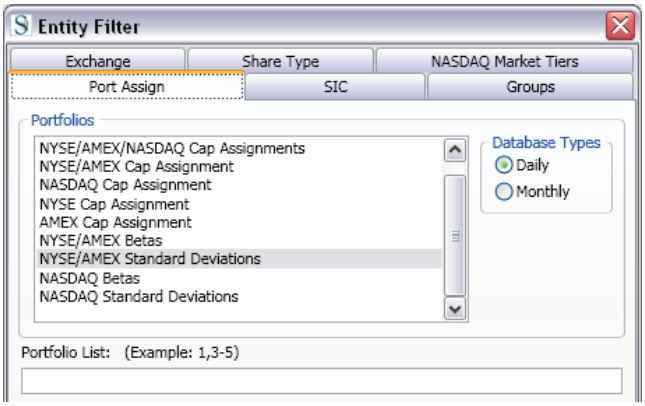


Portfolio Assignment

Portfolio Assignments are only available for use with a Stock and Index Database. A Stock and Index Database subscriber has access to nine sets of daily and eight sets of monthly portfolios. Each entity in the CRSP universe may be a member of a number of CRSP portfolios, which are based on combinations of market capitalization and exchange membership or group membership.

The Port Assign Filter allows you to restrict your query to a subset of the CRSP universe, composed of your choice of portfolio sets and the portfolios within them.

To filter by portfolio assignment, select a Database Type, Daily or Monthly, and then select a portfolio set from the list of portfolio sets. Next enter a list or range of portfolios from the set. For example, to choose portfolios 1, 3, 4, 5, and 10, enter "1,3-5,10" in the Portfolio List field. Refer to Chapter 4 of the Stock and Index Data Description Guide for a list of all portfolios and sets of portfolios.

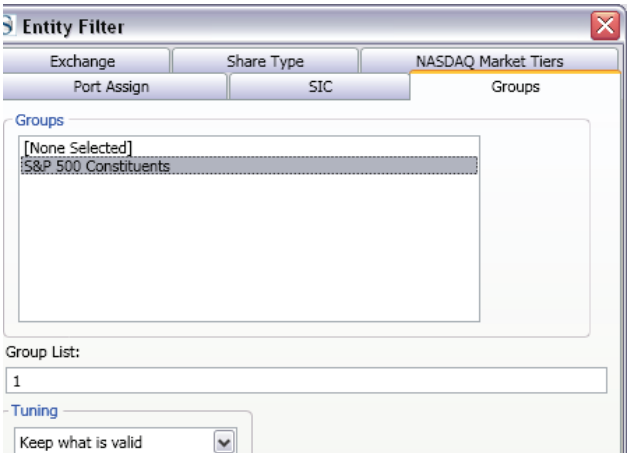


Note: Be sure to match the database type of the items you select on the Data Items tab to the database type of the portfolio you filter by here. For example, if you filter by portfolios in the Monthly NYSE Cap Assignment, select items only from the Monthly Stock & Index group on the Data Items tab.

Groups

Currently the only group defined is the S&P 500 Constituents. Selecting this filter limits output to those issues listed in the S&P 500 during the time

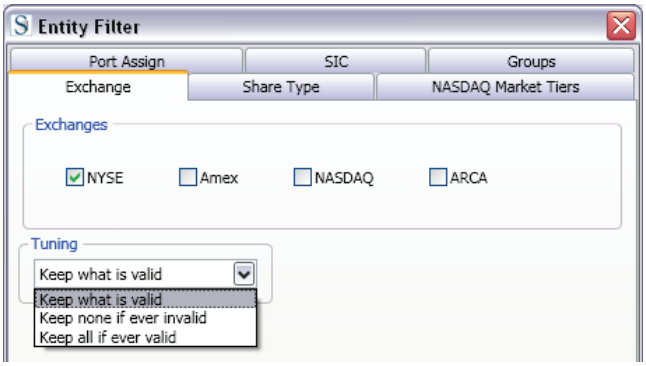
period covered by the query. Use of Groups is limited to Stock and Index Database subscribers.



Filter Tuning

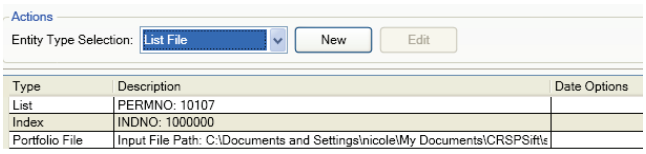
Each entity filter can be further refined by selecting one of three tuning flags. The flags are:

- **Keep what is valid -** Keep only the trading history of an issue where the selected filter applies.
- **Keep none if ever invalid -** Discard all data on an issue if the selected filter fails to match at any point in the time period of the query.
- **Keep all if ever valid -** If the selected filter matches an issue at any point during the time period of the query, all data on that issue is kept.
-

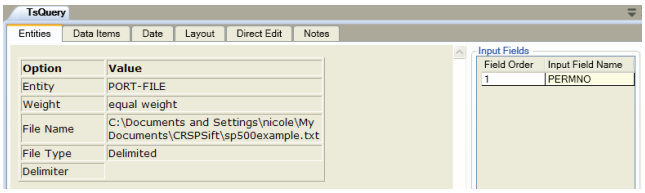


THE ENTITY HOPPER

After setting appropriate options, click the Add button to add this entity to the hopper in the lower area of the screen.



Clicking an entity's row in the hopper displays the options and values you have set for it.



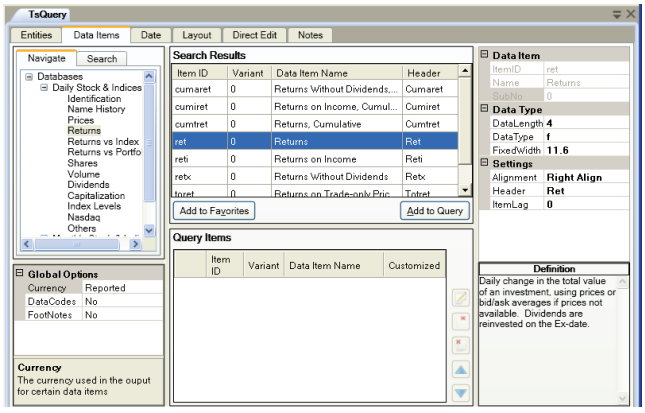
Using this method, add as many entities as your query requires. If you wish to change the order in which entities appear in the hopper, click on a row and use the arrow buttons to move it up or down.

To go back and edit an entity click its row in the hopper, and then click the Edit button.

When you have finished editing the entity, click the Save button to save your changes. To delete an entity from the hopper, select its row and click the Remove button. The Remove All button deletes all entities that you have added.

DATA ITEMS

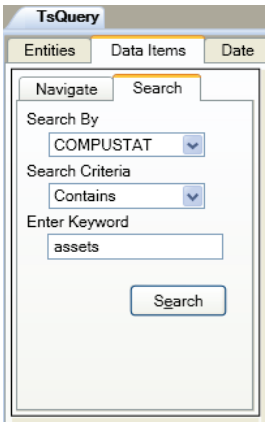
In the Data Items screen you can select the CRSP data items relevant to your query.



SEARCHING AND NAVIGATING DATA ITEMS

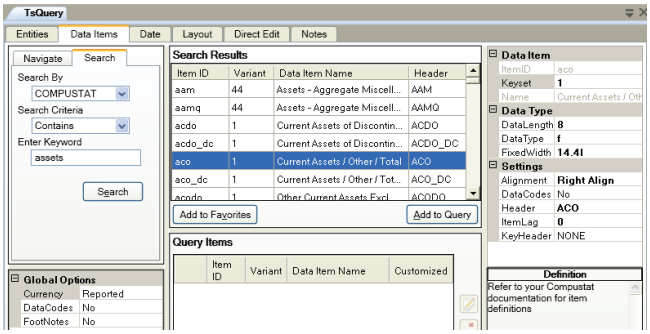
Data items are grouped in the Navigate tab according to the database to which they belong: Daily Stock, Monthly Stock, Compustat (available to CCM Database subscribers), and Favorites. Click the plus sign next to a database to open a categorized list of data items. When you select a category, a list of the data items from that category populates the Search Results area in the central area of the screen.

In addition to navigating items by category, you can search the available data items. To find items this way, click the Search tab.



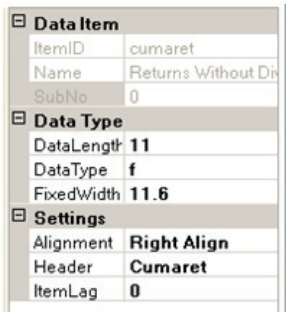
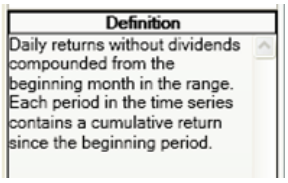
Search is limited to the database selected in the Search By menu. Additional criteria can be supplied as well, such as whether results must be an exact match for the search term, begin or end with the term, or simply contain the term.

Both mnemonic codes and full item names are searched and returned for each item. Click the column names—Item ID, Variant, Data Item Name, or Header—to change the order in which items are sorted.



DATA ITEM PROPERTIES

Further details about an individual item are available on the far right of the screen.

Data Item Settings	Data Item Description
	

Definition
Daily returns without dividends compounded from the beginning month in the range. Each period in the time series contains a cumulative return since the beginning period.

After selecting a data item, if you want to keep its default settings, click the Add button to add that item to the hopper below. Otherwise, click the value of a setting you wish to change, modify the settings, and then click Add. Values that appear in bold type are editable. Changing default settings affects the item report formatting.

Data Length

CRSP recommends keeping the Data Length field consistent with the Fixed Width so that the item is not truncated. Data Length is based on the values in the underlying data items.

Data Type

CRSP recommends that Data Type not be edited. What appears in the field is what CRSP has identified to be appropriate for the underlying data item.

Fixed Width

The allotted number of characters that an item will be given in the output file. Fixed Width must be greater than or equal to the Data Length for the requested item. Note that expanding Fixed Width does not increase a data item's numeric precision.

Header

If column headers are used, more descriptive names may replace the default itemids.

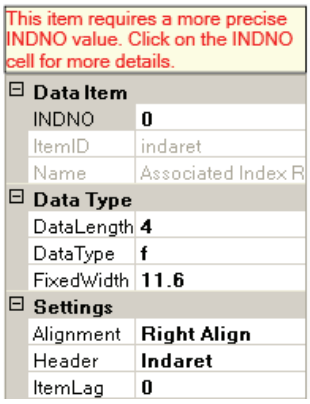
Item Lag

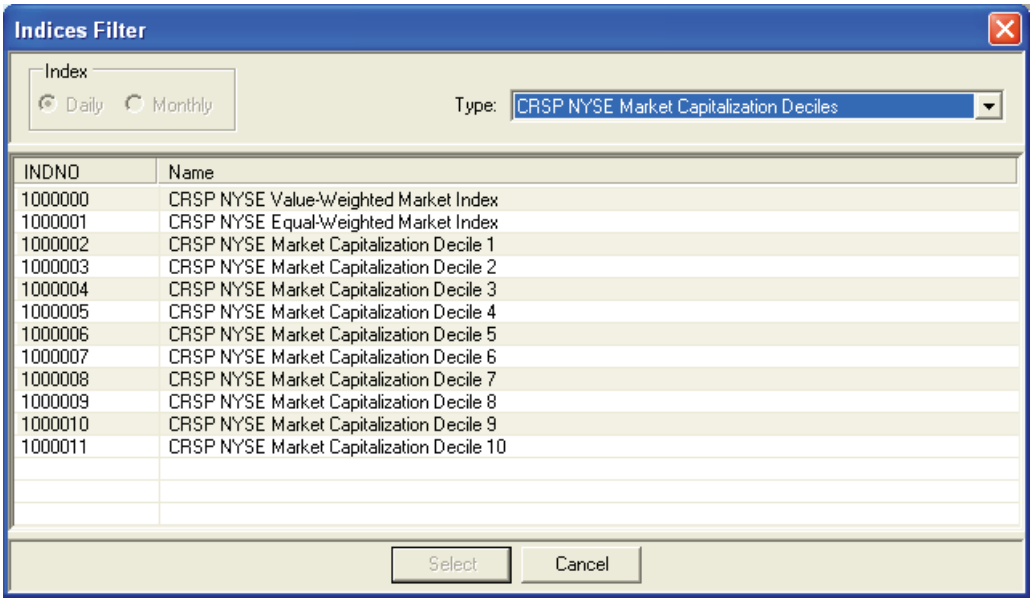
Used to either lead or lag a data item. A positive number of periods will lag the data by the number of periods designated in the output calendar, while a negative number will lead the data item. For example, given a December 2006 date in an output file, prices requested with a two month lag will return the October 2006 values, and prices requested with a two month lead will return prices for February 2007.

INDNO/SUBNO

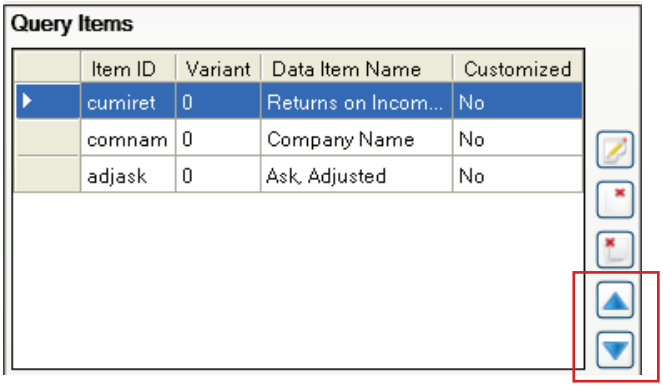
Data items related to an index or portfolio require more specific information before they can be added to the item hopper - a particular INDNO value for an index, or a particular SUBNO value for a portfolio. When these items are selected, red text instructing you how to refine your selection appears above the Data Item Settings area.

Click on the INDNO or SUBNO to open the list of available indexes or portfolios to which the item may be related.




Indices Filter
Index
Daily
Monthly
Type: CRSP NYSE Market Capitalization Deciles
INDNO Name
1000000 CRSP NYSE Value-Weighted Market Index
1000001 CRSP NYSE Equal-Weighted Market Index
1000002 CRSP NYSE Market Capitalization Decile 1
1000003 CRSP NYSE Market Capitalization Decile 2
1000004 CRSP NYSE Market Capitalization Decile 3
1000005 CRSP NYSE Market Capitalization Decile 4
1000006 CRSP NYSE Market Capitalization Decile 5
1000007 CRSP NYSE Market Capitalization Decile 6
1000008 CRSP NYSE Market Capitalization Decile 7
1000009 CRSP NYSE Market Capitalization Decile 8
1000010 CRSP NYSE Market Capitalization Decile 9
1000011 CRSP NYSE Market Capitalization Decile 10
Select
Cancel

Repeat this process until all the data items of interest to you appear in the hopper at the bottom of the screen. As in the Entities screen, use the arrow buttons to the right of the hopper to change the order in which data items appear.



To remove a single item, select its row and click the single document button. To remove all items from the hopper, click the multiple document button.

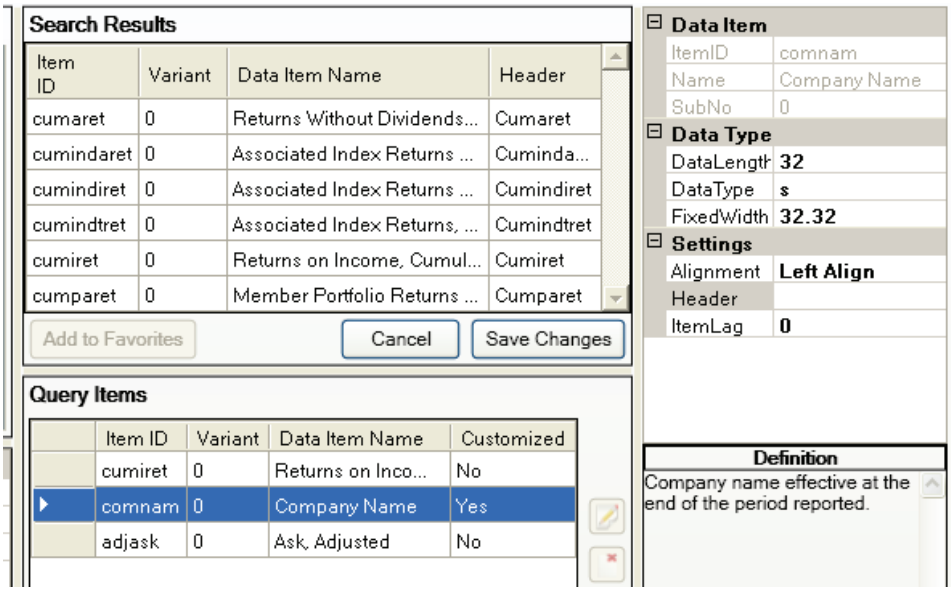
Edit. Click this to edit an item's attributes.

Remove the selected item from your query.

Remove all items from the Query Items list.

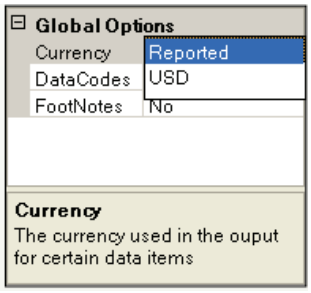
Click the OK button to confirm the addition of the selected items to your query. Click cancel to exit the StkQuery Data Items window without making any changes.

To modify the settings for a data item in the hopper, select its row and click the Edit button. Change the data item settings to your liking, and then click the Save Changes button. When you change an item's settings from the default, its entry in the hopper displays a Yes in the "Customized?" column. To cancel changes, click the Cancel button.



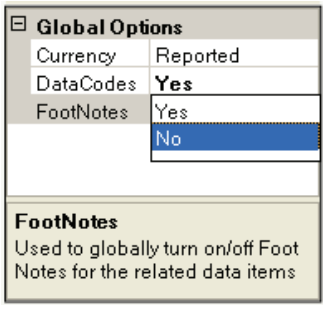
GLOBAL ITEM OPTIONS

When selecting Compustat data items using the new CCM databases, several global option settings are available. The default currency conversion option is to report data items in the currency in which they are reported. By clicking on the drop down menu, you may change this option to convert all items to US Dollars.



You can also choose to include footnotes and/or data codes for the Compustat items in your query that have them. The Footnote and Data Code items can also be extracted automatically for all items that have them by choosing Yes for the settings. This can also be done manually by selecting the individual data codes or footnotes for select data items in the Data Item Settings.

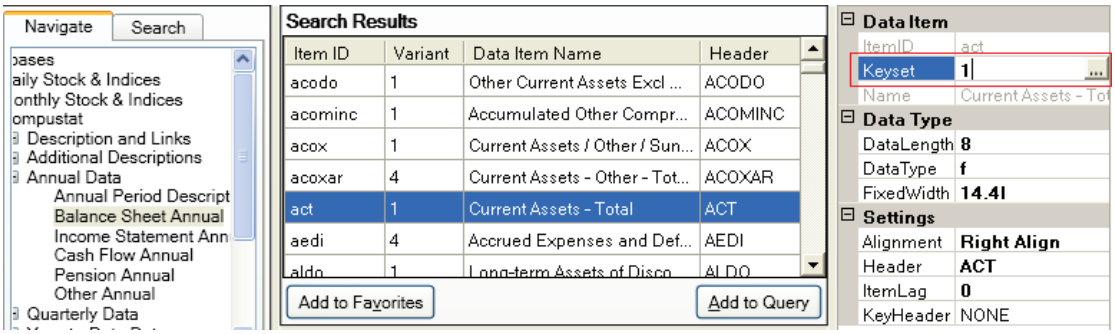
NOTE: Global options must be selected before choosing data items in order for them to be applied.



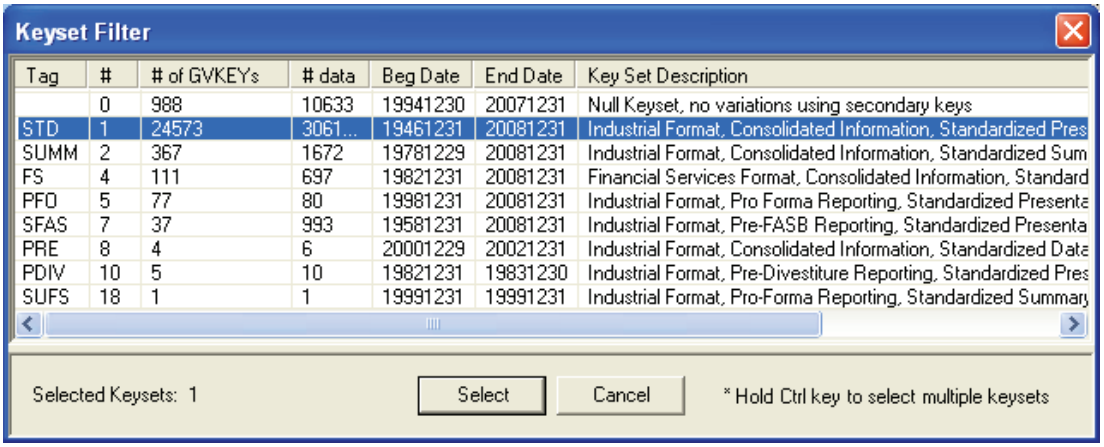
It is important to note that the Global Item Options apply only to Compustat data accessed from the CRSP/ Compustat Merged Database.

KEYSETS

Keysets are CRSP-created groups of Compustat secondary keys that are used to further define Compustat data items. CRSP has identified a default keyset for each data item. Sift allows you to override the default keysets, or select multiple keysets in Sift.



On the Data Items screen, clicking on the Keyset box opens a table of all existing keysets for the items with statistics about each. The default keyset is highlighted upon opening the box and is typically STD, or Standard. The Keyset number is provided, the number of GVKEYs, the number of data points, the date range populated by the data, and a description of the Keyset.


Keyset Filter
Tag # # of GVKEYs # data Beg Date End Date Key Set Description
0 988 10633 19941230 20071231 Null Keyset, no variations using secondary keys
STD 1 24573 3061... 19461231 20081231 Industrial Format, Consolidated Information, Standardized Pres
SUMM 2 367 1672 19781229 20081231 Industrial Format, Consolidated Information, Standardized Sum
FS 4 111 697 19821231 20081231 Financial Services Format, Consolidated Information, Standard
PFO 5 77 80 19981231 20081231 Industrial Format, Pro Forma Reporting, Standardized Presenta
SFAS 7 37 993 19581231 20081231 Industrial Format, Pre-FASB Reporting, Standardized Presenta
PRE 8 4 6 20001229 20021231 Industrial Format, Consolidated Information, Standardized Date
PDIV 10 5 10 19821231 19831230 Industrial Format, Pre-Divestiture Reporting, Standardized Pres
SUFS 18 1 1 19991231 19991231 Industrial Format, Pro-Forma Reporting, Standardized Summary
Selected Keysets: 1
Select
Cancel
* Hold Ctrl key to select multiple keysets

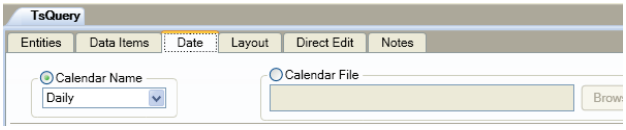
Choose different or additional keysets and click the Select button to close the window.

DATE

The Date screen allows you to control what dates will be used in the output for the data items selected for each entity.

CALENDAR OPTIONS

You can define your own set of dates for a query, or you can select one of several predefined calendars. To use a predefined calendar, click the "Calendar Name" radio button and select a calendar—Daily, Weekly, Monthly, Quarterly, or Annually—from the menu.

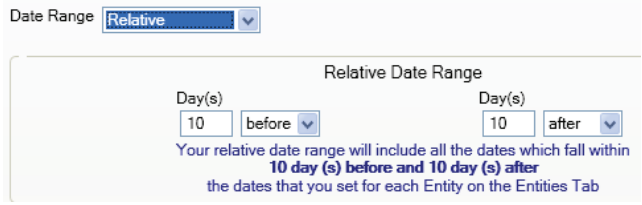


You may want to create a custom calendar with dates for output that are not available in one of the standard Calendar Name options. Click on the Calendar File radio button to select a user-generated calendar.

Refer to the Calendar File Wizard chapter in this guide for information on creating a custom calendar file.

DATE RANGE

Date usage is linked to any date information entered in the Entities screen. If an event date is assigned to an issue, either in the Entities screen, or included in the list entity input file, Relative Date Range should be selected.



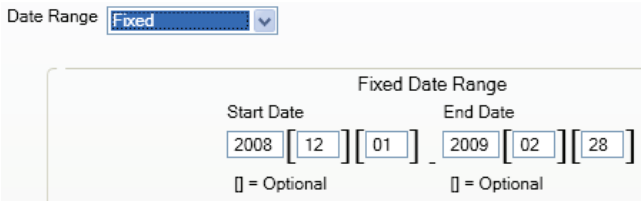
A relative date range specifies a window of time, in days, based on the event date chosen in the Entities screen. It is tied to the calendar selected for the output. Take, for example, an event date of October 18, 2005, with the Daily calendar selected for output. We would like to limit the results of our query to information from the five trading days preceding, but not including, the event date. To accomplish this, we first set the date range type to Relative. Then, in the Relative Event Date Range controls, we set the first parameter to five trading days before and the second parameter to one trading day before.

The query will now return information only from October 13, 2005 to October 17, 2005. Similarly, depending on your needs, you could set the range to a window of days either surrounding or after a selected event date.

Helpful hint:

When using relative dates, include Date, caldt, as an output item in your query. Without caldt, all that returns is an item's position relative to the event date, with the event date always equal to zero.

For all queries that do not employ event dates, the default Fixed Date Range should be selected in the Date screen.



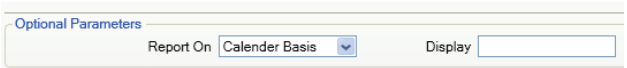
If a date range is specified in the Entities tab, Fixed Date Range acts as an umbrella to the beginning and ending dates selected, and must cover all dates requested. For example, if you used the following list entity input file, the Fixed Date Range set in the Date screen would need to span 19751230-19961231.

```
12490 19751230 19861001 IBM
10107 19900930 19961231 Microsoft
```

Optional Parameters

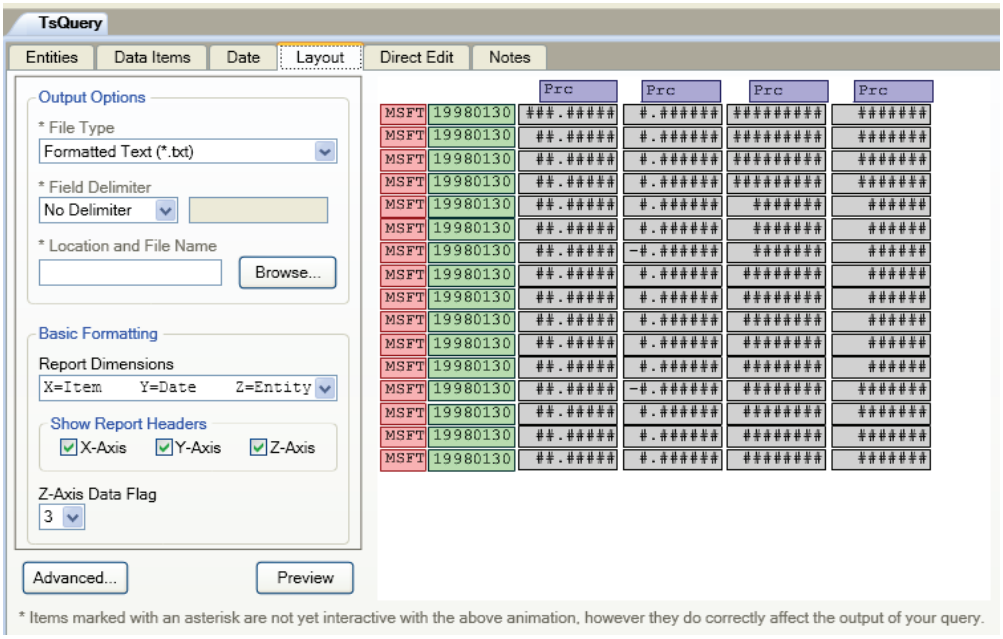
The Report On menu allows you to select either a Calendar Basis or Fiscal Basis for reporting. This option applies only to Compustat data items, controlling whether to report based on a security's fiscal year or the December calendar year. Queries accessing only CRSP data report on the December calendar basis.

The Display field allows you to select specific dates or a range that falls within a fixed date range that will be displayed in the output.



LAYOUT

On the Layout screen you specify the file type, save location, and physical layout of a query's output.



OUTPUT OPTIONS

TsQuery can save report output in a variety of file formats. By default TsQuery saves reports as Formatted Text files with no field delimiter, which is intended to be human-readable.

Choosing a Field Delimiter

If you plan to import query output into another program for further processing, select a field delimiter from the Field Delimiter menu. A field delimiter is a marker that tells the importing program where to split a data record into its constituent data fields. Available options are Pipe (|), Comma (,), and Space ( ). You can enter your own preferred field delimiter by selecting Custom and typing a value in the text field next to the menu.

Supported File Formats

In addition to Formatted Text, TsQuery can save query output directly to any of the following file formats:

- **Excel 97-2003 Workbook (*.xls)** - Excel version 8.
  NOTE: Excel version 8 has a row limit of 65536 total rows. If a query generates more than that number of rows, the output will be truncated at the row limit.
- **Excel 2007 Workbook (*.xlsx)** - Excel XML
- **MAT-files (*.mat)** - Matlab version 7
- **SAS Dataset (*.sas7bdat)** - SAS version 7
- **Stata File** (*.dta)
- **SPSS File** (*.sav)

BASIC FORMATTING

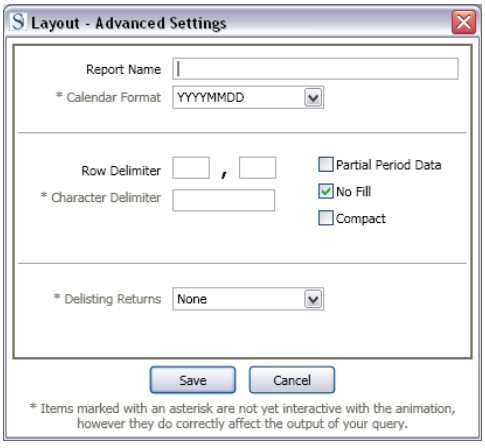
In the default Formatted Text format, X, Y, and Z correspond to the Data Item, Date, and Entity information added to the query. The preview pane of the Layout screen shows an animated preview of how your report will appear, allowing you to visualize it without first having to execute the query. The preview is best used to visualize the appearance of Formatted Text (.txt) output. The appearance of output in other formats, such as Excel or Matlab, will vary according to the target application. Previewing saves time and enhances the readability of your output. If, for instance, your query uses only a few entities, you may wish to place Entity on the report's X axis. If it uses many, you may prefer to place it along the Y or Z axis to limit the output's physical width.

The nature of your query will determine the proper report layout. Use the controls to the left of the preview pane to test various scenarios. To see how a report will look given particular settings, modify the layout controls, and then click the Preview button. The contents of the pane will reorganize to reflect your settings, and the axes will briefly flash with color to identify themselves: X is purple, Y is green, and Z is red. It may be helpful to think of X as "rows," Y as "columns," and Z as "page".

When you have found a suitable layout, click the Browse... button next to the Location and File Name field. Navigate to where you want to save your report, give the file a descriptive name, and then click the Save button. When you execute the query, CRSPSift will save the report in this file.

ADVANCED LAYOUT SETTINGS

Click the **Advanced...** button to access the following advanced layout settings.



Report Name

A text description that will appear at the top of the report. (Formatted Text output only)

Calendar Format

Controls formatting of the dates appearing in the output when date headers are chosen. Options include:

FORMAT	EXAMPLE
YYYYMMDD (default)	20071231
YYMMDD	071231
MM/DD/YY	12/31/07
MM/DD/YYYY	12/31/2007
DD-mmm-YYYY	31-Dec-2007
Cal-Based	2007.4 (for the quarterly calendar)

Row Delimiter

Controls the number of rows between output lines. The first integer is the number of blank lines between rows when the Z-axis value changes and impacts Z-flag options 1 and 3. The second integer is the number of blank lines between all data rows. The default is 0,0.

Character Delimiter

A character string placed before and after all character string fields—Company Name, for example—in report records. The default is no character string delimiter. For example, a value of * would cause the character string field Company Name to be surrounded by asterisks in output.

Partial Period Data

Includes partial-period data in the output. If *not* selected, ts_print will not include the last month of data for a company that stopped trading mid-month, because only months with end-of-month data are normally included. This option applies to monthly data.

No Fill

The No Fill option, enabled by default, causes rows outside an issue's date range or the user's date

specification not to print to the output file. No Fill is applicable under the following conditions:

- Item is chosen for the X-axis
- Date is the Y-axis
- Entity is the Z-axis
- Z-Axis Data Flag is set to 1 or 3
- Fixed Date Range is selected on the Date tab.

No Fill does not work with relative dates.

Compact

Compresses output by removing all spaces and trailing decimal zeros in numbers. Compact is ideal for producing output to be loaded into another program.

Delisting Returns

Default Missing: Outputs the default value (`-88.0`) for missing delisting returns for entities that have delisted during the selected dates. You must have a Returns data item selected in the Data Items tab in order to include Delisting Returns in your output.

Custom Missing: Outputs user-specified missing delisting return codes. You may assign missing values for a range of delisting codes for select beginning and ending exchanges. To do this, create a text input file containing the following fields in the following order: begin delist code, end delist code, begin exchange code, end exchange code, alternate delisting return value, alternate delisting return without dividends value.

For example:

```
200   299 1 3 -0.50 -0.55

500   570 3 3 -0.40 -0.45

571   600 3 3 -0.30 -0.35
```

Note that in this example, the first row would assign a `-0.50` value to missing delisting returns for securities with delisting codes 200-299 that initially traded on NYSE and ended up trading on NASDAQ, and `-0.55` for missing delisting returns without dividends. If your query includes a security with a missing delisting return that was not included in your input file, the default missing delisting return, `-55.0`, would be used instead.

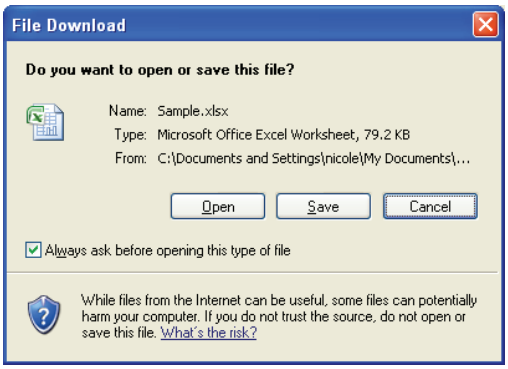
DIRECT EDIT

To use this feature, click the Direct Edit tab. Click the Edit button above the text area there, and then type or paste your query code, overwriting the template query code. When you are finished, click Save. If the syntax of your query is correct, CRSPSift automatically populates the appropriate fields in the other screens to reflect your query code.

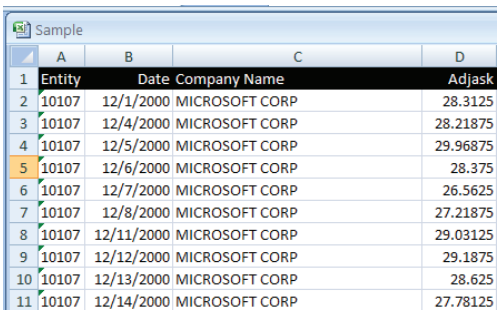
EXECUTING A QUERY

After executing a query, click the View Output button on the CRSPSift toolbar.

The File Download window opens, prompting you to open the output file in the target application or to save it in a different location.


File Download
Do you want to open or save this file?
Name: Sample.xlsx
Type: Microsoft Office Excel Worksheet, 79.2 KB
From: C:\Documents and Settings\nicole\My Documents\...
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

Click Open to open the output file in the target application (Excel 2007, in the example shown below).



	A	B	C	D
1	Entity	Date	Company Name	Adjask
2	10107	12/1/2000	MICROSOFT CORP	28.3125
3	10107	12/4/2000	MICROSOFT CORP	28.21875
4	10107	12/5/2000	MICROSOFT CORP	29.96875
5	10107	12/6/2000	MICROSOFT CORP	28.375
6	10107	12/7/2000	MICROSOFT CORP	26.5625
7	10107	12/8/2000	MICROSOFT CORP	27.21875
8	10107	12/11/2000	MICROSOFT CORP	29.03125
9	10107	12/12/2000	MICROSOFT CORP	29.1875
10	10107	12/13/2000	MICROSOFT CORP	28.625
11	10107	12/14/2000	MICROSOFT CORP	27.78125

CHAPTER 4: STKQUERY: STOCK DATA ACCESS

StkQuery is used to extract CRSP stock header, event, and time-series data items. Designed primarily to access data on an individual security, it can also access a list of securities supplied in an input file, or all securities in the database.

Locate the StkQuery toolbar below the main CRSPSift toolbar.

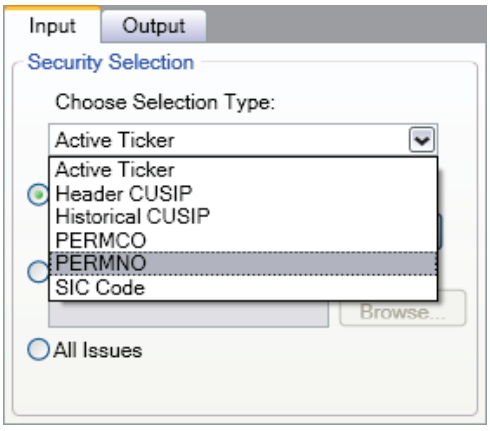
In the Database field, select which CRSP database your query will use, either Daily or Monthly. Next, specify a date range. Enter dates using one of the following formats: YYYYMMDD, YYYYMM, or YYYY. The following table provides examples of how to use the various formats.

START	END	RESULT
199609	199612	all data from the beginning of September through December of 1996
1990	(empty)	all data in the year 1990
1994	19940615	all data from the beginning of 1994 until June 15, 1994
19961231	(empty)	data only on the date December 31, 1996

By default, StkQuery returns data from the last three months of the CRSP database being accessed.

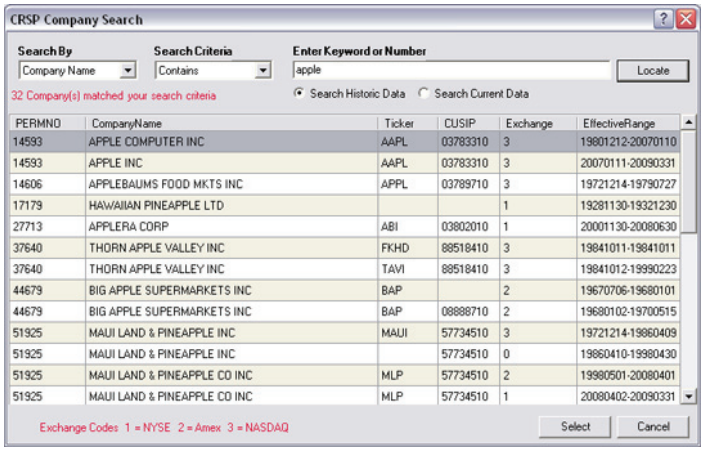
SECURITY SELECTION

From the Choose Selection Type drop-down menu in the Security Selection area, specify the key, such as PERMNO or Active Ticker symbol, your query will use.



Next, identify the issue or issues of interest. If you know an identifier, you can enter it directly. For example, the ticker symbol of Apple Computer is AAPL. Given that knowledge, you can set the key to Active Ticker and type AAPL as the identifier.

If you do not know an identifier, click the Find... button to open the Company Search window.


CRSP Company Search
Search By
Company Name
Search Criteria
Contains
Enter Keyword or Number
apple
Locate
32 Company(s) matched your search criteria
Search Historic Data
Search Current Data
PERMNO CompanyName Ticker CUSIP Exchange EffectiveRange
14593 APPLE COMPUTER INC AAPL 03783310 3 19801212-20070110
14593 APPLE INC AAPL 03783310 3 20070111-20090331
14606 APPLEBAUMS FOOD MKTS INC APPL 03789710 3 19721214-19790727
17179 HAWAIIAN PINEAPPLE LTD 1 19281130-19321230
27713 APPLERA CORP ABI 03802010 1 20001130-20080630
37640 THORN APPLE VALLEY INC FKHD 88518410 3 19841011-19841011
37640 THORN APPLE VALLEY INC TAVI 88518410 3 19841012-19990223
44679 BIG APPLE SUPERMARKETS INC BAP 2 19670706-19680101
44679 BIG APPLE SUPERMARKETS INC BAP 08888710 2 19680102-19700515
51925 MAUI LAND & PINEAPPLE INC MAUI 57734510 3 19721214-19860409
51925 MAUI LAND & PINEAPPLE INC 57734510 0 19860410-19980430
51925 MAUI LAND & PINEAPPLE CO INC MLP 57734510 2 19980501-20080401
51925 MAUI LAND & PINEAPPLE CO INC MLP 57734510 1 20080402-20090331
Exchange Codes 1 = NYSE 2 = Amex 3 = NASDAQ
Select
Cancel

Use the search form to locate a particular company in the CRSP database. Companies matching your search criteria appear in a table, initially sorted by PERMNO. If your search yields many matches, click the column labels to resort the table in the order most useful to you. When you have found the company you want, click its row in the table, and then click the Select button. The PERMNO of that company will appear in the identifier field.

You may also choose to access all issues in the database, or issues you specify in an input file. To search all issues, click All Issues in the Security Selection area. To use an input file, first create a plain text file (using the Microsoft Windows Notepad accessory, for instance) with an entry for each issue, one per row, using the active key of your choice.

For example, to search for Apple and Microsoft by PERMNO using an input file, create and save the following two line text file:

```
14593
10107
```

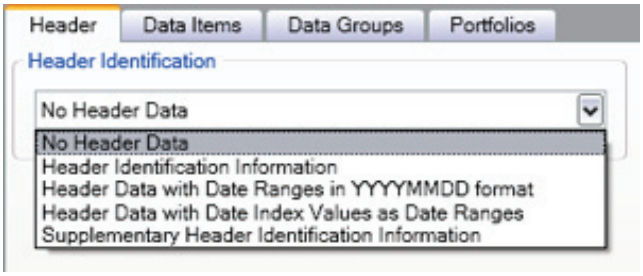
Next, select PERMNO from the Active Key menu.

Click Input File in the Security Selection area, and

then click the Browse... button to locate the file you created.

HEADER IDENTIFICATION

Click the Header tab if it is not the active tab. In this screen, select the stock header information that you want in your report and how it should appear.



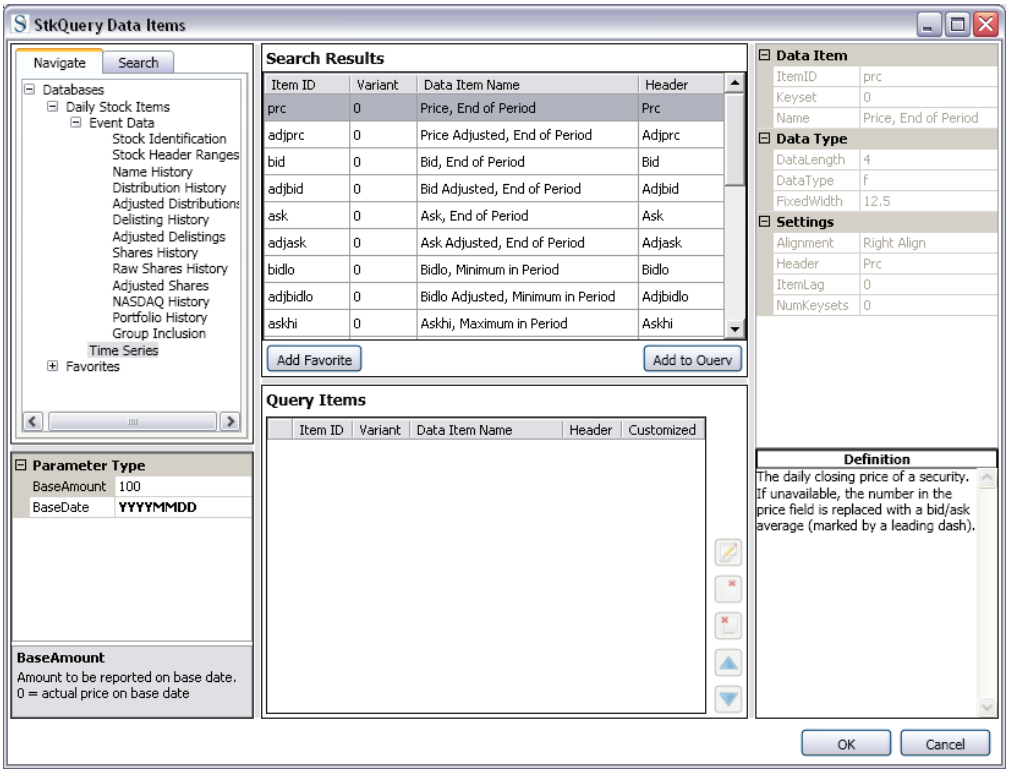
DATA ITEMS

Use the Data Items tab to control what individual event and time series data items your query will use.

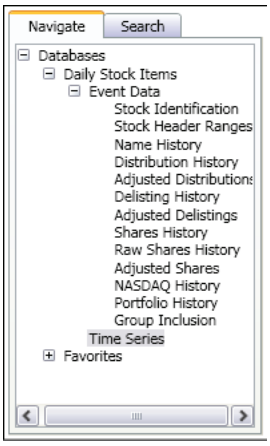
SELECT/EDIT DATA ITEMS

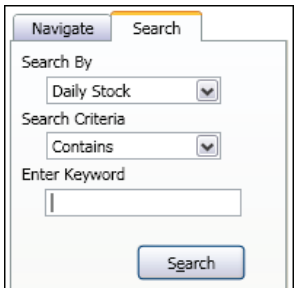
Clicking this button launches the interface for selecting individual event and time series items in StkQuery.

The StkQuery Data Items window is divided into several areas.



Items are divided into logical groups in the Navigate/ Search area.





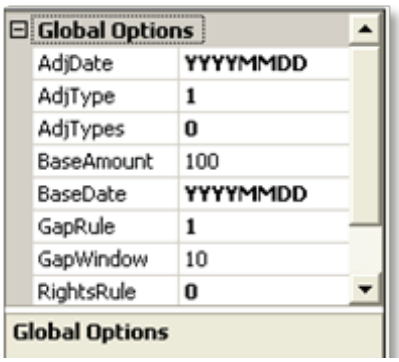
Clicking the name of a group causes its data items to appear in the Search Results area. Or, rather than browsing by category, click the Search tab. There you can enter a descriptive keyword (e.g., "NASDAQ") to find items of interest. Browsing and searching both cause the data items found to appear in the Search Results area of the window.

Search Results

Item ID	Variant	Data Item Name	Header
prc	0	Price, End of Period	Prc
adjprc	0	Price Adjusted, End of Period	Adjprc
bid	0	Bid, End of Period	Bid
adjbid	0	Bid Adjusted, End of Period	Adjbid
ask	0	Ask, End of Period	Ask
adjask	0	Ask Adjusted, End of Period	Adjask
bidlo	0	Bidlo, Minimum in Period	Bidlo
adjbidlo	0	Bidlo Adjusted, Minimum in Period	Adjbidlo
askhi	0	Askhi, Maximum in Period	Askhi

When you highlight an item in the Search Results area, its attributes and a short text description appear in the window areas to the right.

GLOBAL OPTIONS

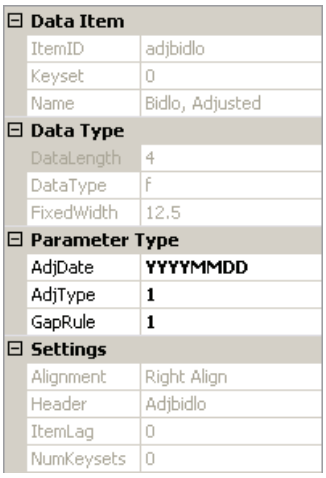


StkQuery allows users to modify output data items by changing default parameters for certain types of items. Defaults can be modified for all items selected in a query by defining parameters in the Global Options table on the Data Items screen.

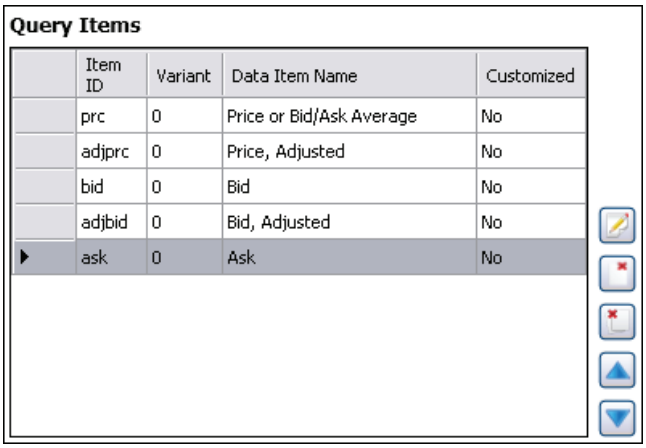
PARAMETER	DEFAULT	DEFINITION
AdjDate	Default is to adjust values through the latest date of the database.	The adjustment date is the anchor date on which all data are presented as they were reported and are adjusted back in time by selected or default factors from that point.
AdjTyp	Default is to apply all factors	The adjustment type value represents the factors that are applied to price adjustments. Choices are 1 = Apply All Factors or 2 = Apply Stock Splits and Dividends
AdjTypes	Default is to apply stock splits and dividends	The adjustment types values represents the factors that are applied to shares and volume adjustments. Choices are 1 = Apply All Factors or 2 = Apply Stock Splits and Dividends
BaseAmount	Default is 100	The base amount is the amount to be reported on a specified base. For use with Time Series items Total Return Index Level and Price Index Level.
BaseDate		If specifying a base amount, a base date must be provided for the date to apply the amount. Values before and after the specified date will be indexed to the amount.
GapRule	Default is to set values to missing upon exceeding the specified gap	Gap rule defines when and if to introduce missing values when a specified number of periods passed with no new data. Choices are 0 = Continue data after the gap and 1 = set missing values after the gap
GapWindow	Default is 10	The gap window defines the maximum number of dates allowed to pass between two dates where the previous value of an item remains valid. For example, with the default of 10, a price from up to ten trading dates ago is eligible for use in the returns calculation if there are no more current prices. Once that 10th day has passed, using the default gap rule, the price is considered missing and will no longer be available for use in the returns calculation.

PARAMETER	DEFAULT	DEFINITION
RightsRule	Default is to use Share History	The rights rule is used to apply share factors from rights distributions. Choices are 0 = Use shares history, 1 = Recreate shares history.
ValidExch	Default is all exchanges	Valid exchange identifies the exchanges of interest to be used. Choices can be modified by clicking on the text box and checking/unchecking available exchanges. Valid exchanges is used in conjunction with the calculated returns items, cret and cretx.

Fields that can be edited are parameters in bold, black text associated with adjusted values. These are set to default values and may be modified.



Select each item you want in your query, adjust its parameters if necessary, and then click the Add to Query button to add it to the Query Items area below the Search Results.



Items in the Query Items area appear in the order that they will appear in your query's output. To adjust the position of an item, select it and click the blue up and down arrows to move it up or down the list. The other buttons are:

Edit. Click this to edit an item's attributes.

Remove the selected item from your query.

Remove all items from the Query Items list.

Click the OK button to confirm the addition of the selected items to your query. Click cancel to exit the StkQuery Data Items window without making any changes.

Import Data Item File...

Clicking this button allows you to import a list of data items into your query from a text file. The file contains a single column of item mnemonics item IDs.

Export to File...

Use this option to output the Selected Data Items list to a text file containing each item's mnemonic itemid. This text file may then be imported into other queries using the Import Data Item File... button.

DATA GROUPS

The Data Groups tab allows you to select combinations of related event or time series data items.

Available groups include:

Event Data

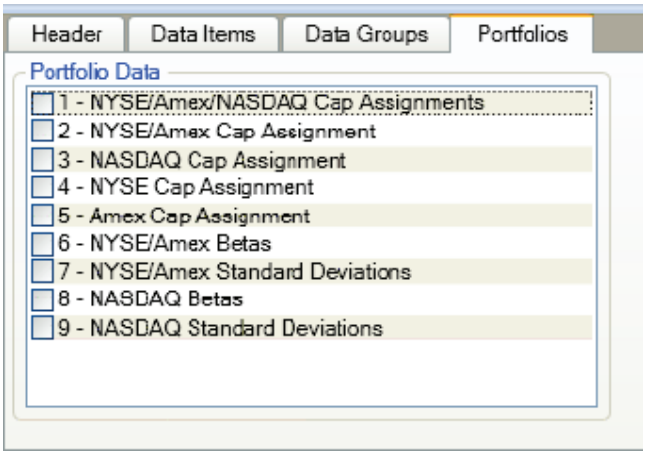
- Adjusted Delistings
- Adjusted Distributions
- Adjusted Shares
- Delisting History
- Distribution History
- Group Inclusion
- NASDAQ History
- Name History
- Name History - Short
- Portfolio History
- Raw Shares History
- Shares History

Time Series Data

- Adjusted Market Summary
- Adjustted Price, Shares
- Market Summary
- Price and Index Levels
- Price and Returns
- Price and Shares

PORTFOLIOS

The Portfolios screen is applicable for Stock and Index Databases only. It provides a list of predefined portfolios. Choose one or more of them to view the performance of an issue or issues over time, using the selected portfolios as benchmarks. The data frequency — daily or monthly — will determine the list of available portfolios.



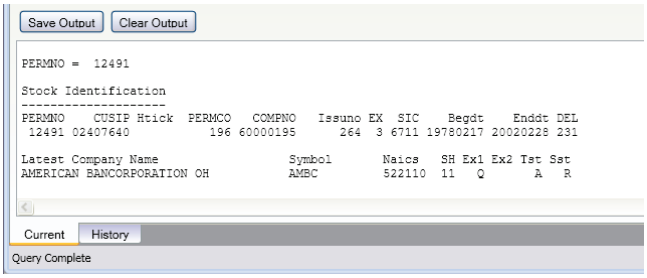
OUTPUT OPTIONS

You can save the output of an StkQuery in one of several formats. Click the Output tab to show the Output Options panel.

OUTPUT TO SCREEN

The default option is text-based output, formatted to fit the screen width specified in the Width control. 80 characters is the default output width.

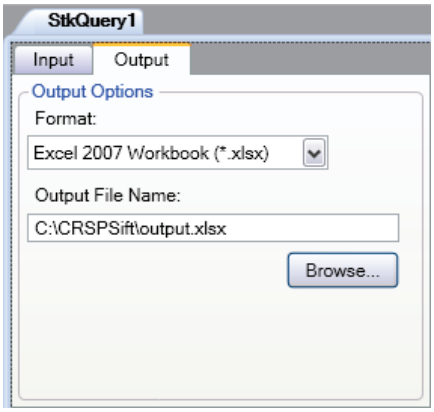
Screen output appears in the output area at the bottom of the StkQuery window.


Save Output
Clear Output
PERMNO = 12491
Stock Identification
PERMNO CUSIP Htick PERMCO COMPNO Issuno EX SIC Begdt Enddt DEL
12491 02407640 196 60000195 264 3 6711 19780217 20020228 231
Latest Company Name Symbol Naics SH Ex1 Ex2 Tst Sst
AMERICAN BANCORPORATION OH AMBC 522110 11 Q A R
Current
History
Query Complete

By default, the output of the last query execution is shown in the Current tab. The Save Output and Clear Output buttons at the top of the output area allow you to save output to a text file or to clear it away. Clicking the History tab shows you the output of every query execution since the StkQuery session was launched. When you switch to the query history view, the buttons above the output area change to Save History and Clear History. Save History allows you to capture the output of an entire session. You can select a new security, or different data or options related to the same security. Each time you click Execute the new output is saved in the History tab. By clicking Save History, you can save all the output to one text file.

OUTPUT TO FILE

You can also save query output in a number of external file formats. When you choose a non-screen output format, the Output File Name field becomes active. In order to successfully execute the query, you must select a location to store the output file. Click the Browse button to do so.

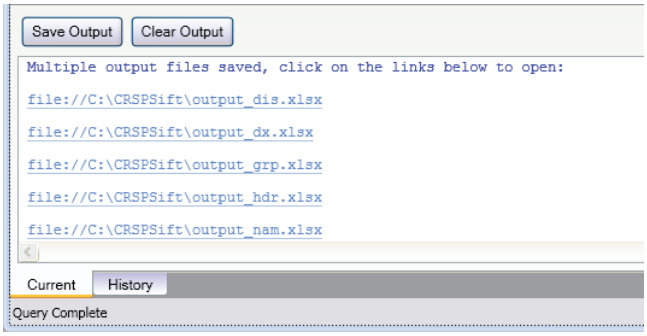


Supported File Formats

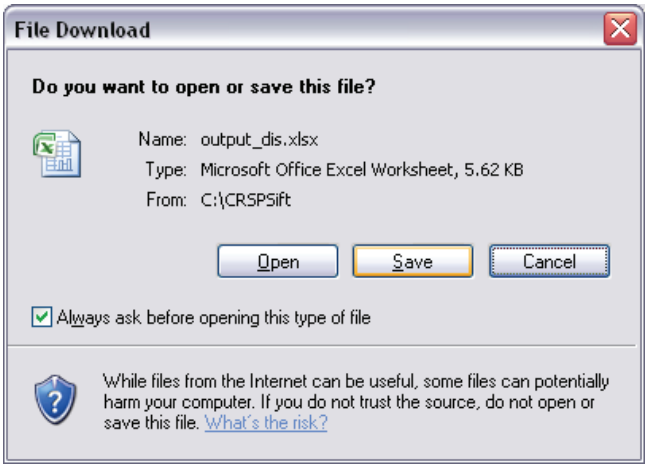
- **Pipe(|) Delimited, For Import** - pipe-deliimited ASCII text, suitable for importing into databases or software packages not directly supported by CRSPSift. This option generates a single output file.
- **Excel 97-2003 Workbook (*.xls)** - Excel version 8. **NOTE**: Excel version 8 has a row limit of 65536 total rows. If a query generates more than that number of rows, the output will be truncated at the row limit.
- **Excel 2007 Workbook (*.xlsx)** - Excel XML
- **MAT-files (*.mat)** - Matlab version 7
- **SAS Dataset (*.sas8bdat)** - SAS version 7
- **Stata File** (*.dta)
- **SPSS File** (*.sav)

VIEWING OUTPUT FILES

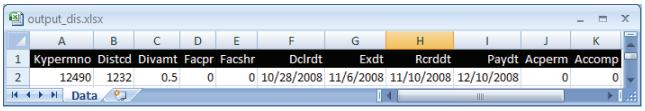
With the exception of the Pipe Delimited option, if you select a non-screen output format, StkQuery will generate one or more output files, one for each unique output of the query. When the query completes execution, the output area displays links to the output files generated. Each file will have the name specified in the Output File Name field, with the addition of an extension identifying the type of data it contains.



Clicking one of the output files links opens the File Download dialog box.

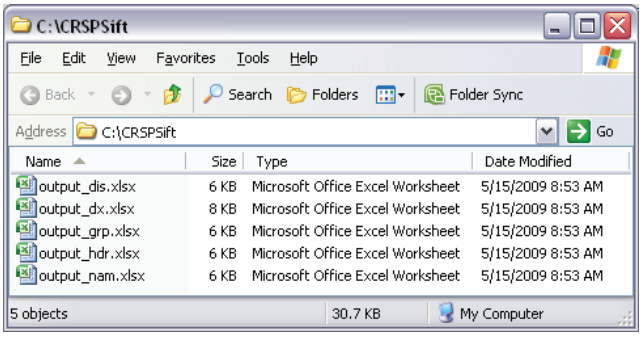

File Download
Do you want to open or save this file?
Name: output_dis.xlsx
Type: Microsoft Office Excel Worksheet, 5.62 KB
From: C:\CRSPSift
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

Click Open to open the output file in the appropriate application (Excel 2007, in the example shown below).


output_dis.xlsx
Kypermno Distcd Divamt Facpr Facshr Dclrdt Exdt Rcrddt Paydt Acperm Accomp
12490 1232 0.5 0 0 10/28/2008 11/6/2008 11/10/2008 12/10/2008 0 0
Data

Alternatively, you can click the View Output button, located in the CRSPSift toolbar, to view the output files generated by your query.

If a query generated only one file, the target application will open the file directly, as shown above. If the query resulted in multiple output files instead of opening the files, CRSPSift will open a Windows Explorer window showing the folder where you chose to save output.


C:\CRSPSift
File Edit View Favorites Tools Help
Back Search Folders Folder Sync
Address C:\CRSPSift
Go
Name Size Type Date Modified
output_dis.xlsx 6 KB Microsoft Office Excel Worksheet 5/15/2009 8:53 AM
output_dx.xlsx 8 KB Microsoft Office Excel Worksheet 5/15/2009 8:53 AM
output_grp.xlsx 6 KB Microsoft Office Excel Worksheet 5/15/2009 8:53 AM
output_hdr.xlsx 6 KB Microsoft Office Excel Worksheet 5/15/2009 8:53 AM
output_nam.xlsx 6 KB Microsoft Office Excel Worksheet 5/15/2009 8:53 AM
5 objects
30.7 KB
My Computer

OUTPUT FILE SUFFIXES

The following table lists output file suffixes and the type of data they indicate is contained in a file.

DATA GROUP CATEGORY	OUTPUT FILE SUFFIX	
	DAILY	MONTHLY
Adjusted Delistings	adel	madel
Adjusted Distributions	adis	madis
Adjusted Shares	ashr	mashr
Delisting History	del	mdel
Distribution History	dis	mdis
Group Inclusion	grp	mgrp
Name History	nam	mnam
Name History – Short	nams	mnams
NASDAQ History	ndi	mndi
Portfolio History	port	mport
Shares History	shr	mshr
Shares, Escl Imputed	rshr	mrshr
Adjusted Market Summary	adj	madj
Adjusted Price, Shares	adjwgt	madjwgt
Market Summary	dd	md
Price and Index Levels	ds	ms
Price and Returns	dr	mr
Price and Shares	dx	mx

CHAPTER 5: INDQUERY: INDEX DATA ACCESS

IndQuery is used to access index header and time-series data.

Locate the IndQuery toolbar below the main CRSPSift toolbar.

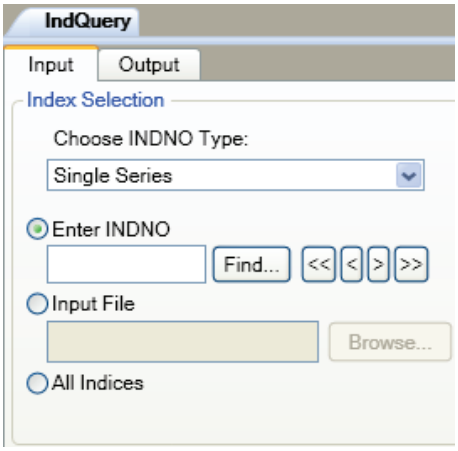
First select whether your query will use the Daily or Monthly database from the Database menu.

Specify a date range for your query. Enter dates using one of the following formats: YYYYMMDD, YYYYMM, or YYYY. The following table shows some examples of how to use the various formats.

START	END	RESULT
199609	199612	all data from the beginning of September through December of 1996
1990	(empty)	all data in the year 1990
1994	19940615	all data from the beginning of 1994 until June 15, 1994
19961231	(empty)	data only on the date December 31, 1996

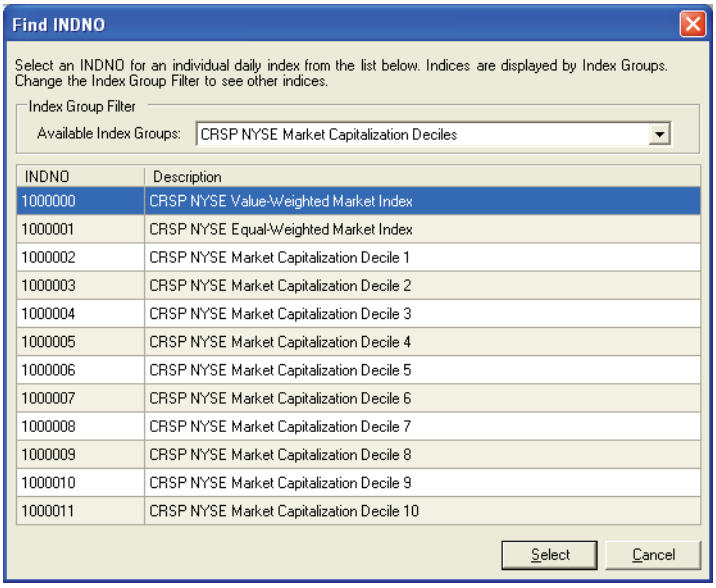
INDEX SELECTION

In the Choose Indno Type drop-down menu, specify whether your query will access a Single Series (an individual index) or a Group of Portfolios. Note that Single Series is for use only with a Stock and Index Database.



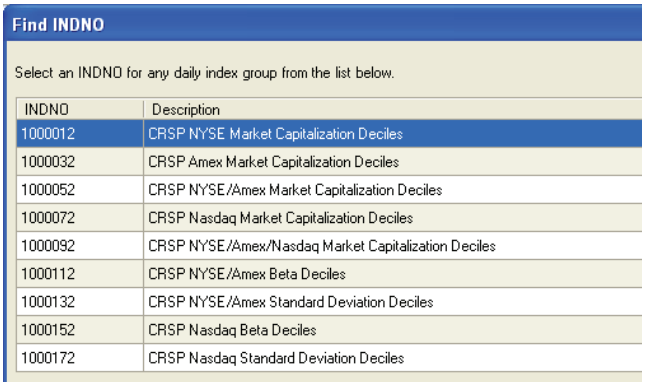
If you know the INDNO of an index, you can type it directly in the Enter INDNO box. Otherwise, click the Find... button to open the Find INDNO window. If your query will access an individual daily index, make sure you have selected Single Series from the INDNO Type menu.

The Find INDNO window will appear as shown below.


Find INDNO
Select an INDNO for an individual daily index from the list below. Indices are displayed by Index Groups. Change the Index Group Filter to see other indices.
Index Group Filter
Available Index Groups:
CRSP NYSE Market Capitalization Deciles
INDNO
Description
1000000 CRSP NYSE Value-Weighted Market Index
1000001 CRSP NYSE Equal-Weighted Market Index
1000002 CRSP NYSE Market Capitalization Decile 1
1000003 CRSP NYSE Market Capitalization Decile 2
1000004 CRSP NYSE Market Capitalization Decile 3
1000005 CRSP NYSE Market Capitalization Decile 4
1000006 CRSP NYSE Market Capitalization Decile 5
1000007 CRSP NYSE Market Capitalization Decile 6
1000008 CRSP NYSE Market Capitalization Decile 7
1000009 CRSP NYSE Market Capitalization Decile 8
1000010 CRSP NYSE Market Capitalization Decile 9
1000011 CRSP NYSE Market Capitalization Decile 10
Select
Cancel

From the Available Index Groups menu, select the index group that contains the index you want. Click the table row containing your target index, and then click the Select button. That index's INDNO will now appear in the Enter INDNO box.

If you are using the Daily database, and you selected Group of Portfolios from the INDNO Type menu, the Find INDNO window will instead look like this:


Find INDNO
Select an INDNO for any daily index group from the list below.
INDNO
Description
1000012 CRSP NYSE Market Capitalization Deciles
1000032 CRSP Amex Market Capitalization Deciles
1000052 CRSP NYSE/Amex Market Capitalization Deciles
1000072 CRSP Nasdaq Market Capitalization Deciles
1000092 CRSP NYSE/Amex/Nasdaq Market Capitalization Deciles
1000112 CRSP NYSE/Amex Beta Deciles
1000132 CRSP NYSE/Amex Standard Deviation Deciles
1000152 CRSP Nasdaq Beta Deciles
1000172 CRSP Nasdaq Standard Deviation Deciles

Simply click to choose the index group you want, and then click the Select button. The index group's INDNO will appear in the Enter INDNO box.

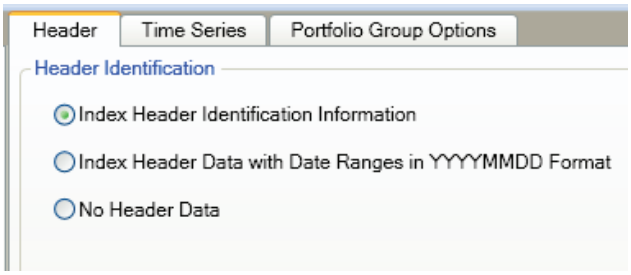
You may also choose to access all indexes in the database, or those that you specify in an input file. To search all indexes, click All Indexes in the Index Selection area. To use an input file, create a text file and enter the INDNO of each index your query will use, one per line. For example, to specify that your query will access the CRSP NYSE Value-Weighted Market Index (INDNO 1000000) and the CRSP AMEX Value-Weighted Market Index (INDNO 1000020), create and save the following two line text file:

```
1000000
1000020
```

Click Input File in the Index Selection area, and then click the Browse... button to locate the input file you created.

HEADER IDENTIFICATION

In the Header tab, choose what header information you want at the top of your query report. Options include standard index header information, header information with date ranges in YYYYMMDD format, or no header information.

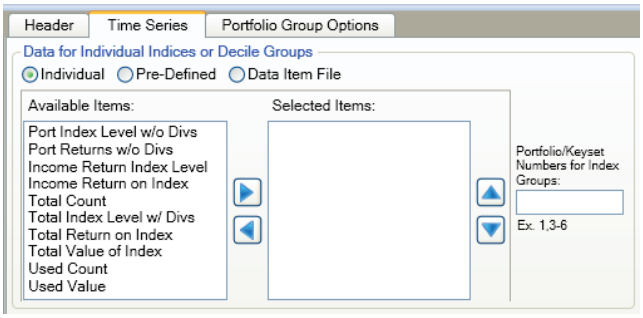


TIME SERIES DATA

In the Time Series tab, you can select the time series data items that are relevant to your query. You can select individual data items, choose pre-defined groups of items, or supply a list of data items in an input file.

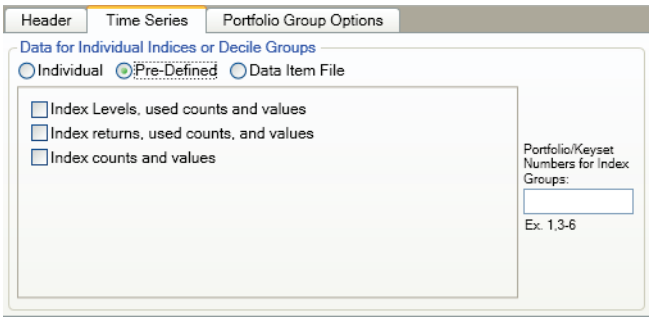
INDIVIDUAL ITEMS

Select an item from the Available Items list at left, and then click the right arrow to move it to the Selected Items list.



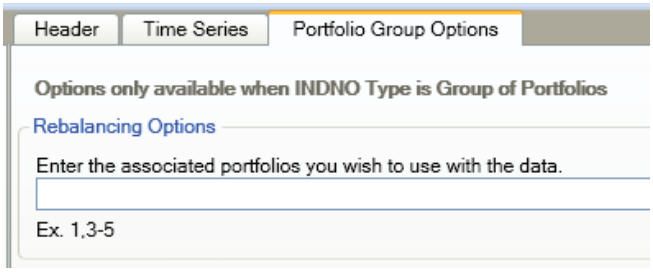
PRE-DEFINED ITEM GROUPS

Alternatively, you can select pre-defined groups of data items.



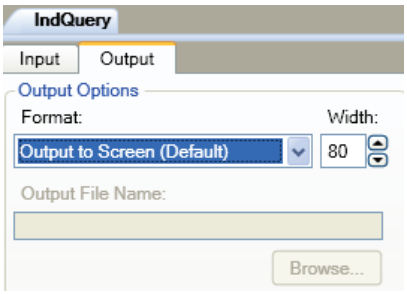
PORTFOLIO GROUP OPTIONS

The Portfolio Group Options is for use only with a Stock and Index Database. Its tab is enabled only if you have selected Group of Portfolios from the INDNO Type menu. Here you can select portfolio range and rebalancing options for your query.


Header
Time Series
Portfolio Group Options
Options only available when INDNO Type is Group of Portfolios
Rebalancing Options
Enter the associated portfolios you wish to use with the data.
Ex. 1,3-5

OUTPUT OPTIONS

You can save the output of an IndQuery in one of several formats. Click the Output tab to show the Output Options panel.



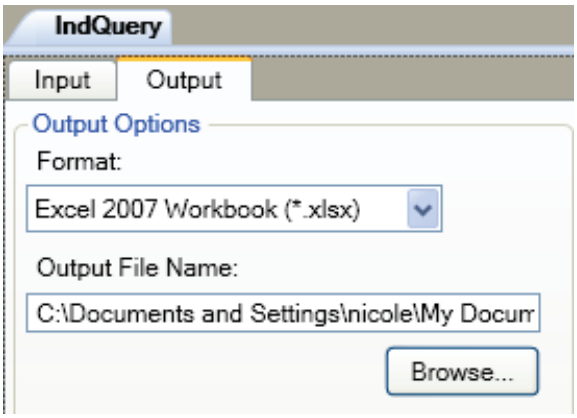
OUTPUT TO SCREEN

The default option is text-based, formatted to fit the screen width specified in the Width control. 80 characters is the default width. Screen output appears in the hopper at the bottom of the IndQuery window.

By default, the output of the last query execution is shown in the Current tab. The Save Output and Clear Output buttons at the top of the output area allow you to save to a text file or to clear it away. Clicking the History tab shows you the results of every query execution since the session was opened. When you switch to the query history view, the buttons above the output area change to Save History and Clear History. Save History allows you to capture the entire session. You can select a new index, or different data or options related to the same index. Each time you click Execute the new output is saved in the history. Then, by clicking Save History, you can save all the output to one text file.

OUTPUT TO FILE

You can also save data in a number of external file formats. When you choose a non-screen output format, the Output File Name field becomes active. In order to successfully execute the query, you must select a location to store the output file. Click the Browse button to select a location to save the file.



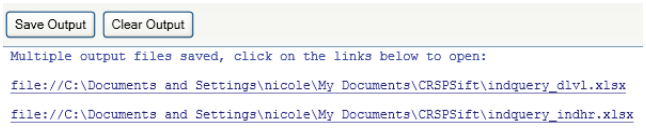
Supported File Formats

- **Pipe(|) Delimited, For Import** - pipe-deliimited ASCII text, suitable for importing into databases or software packages not directly supported by CRSPSift. This option generates a single output file.
- **Excel 97-2003 Workbook (*.xls)** - Excel version 8. **Note:** Excel version 8 has a row limit of 65536 total rows. If a query generates more than that number of rows, the output will be truncated at the row limit.
- **Excel 2007 Workbook (*.xlsx)** - Excel XML
- **MAT-files (*.mat)** - Matlab version 7
- **SAS Dataset (*.sas8bdat)** - SAS version 7
- **Stata File** (*.dta)
- **SPSS File** (*.sav)

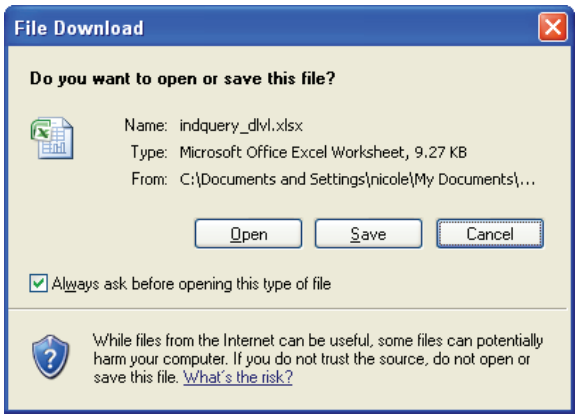
Viewing Output Files

If you select a non-screen output format, IndQuery will generate one or more output files, one for each unique output of the query. When the query completes

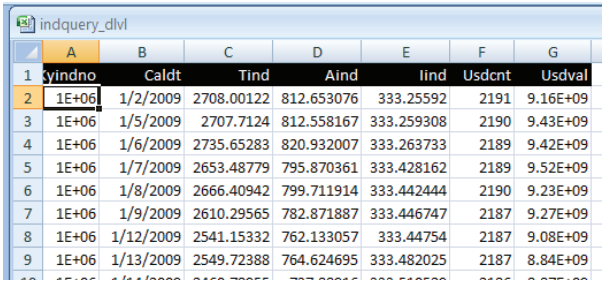
execution, the output area displays links to the output files generated. Each file will have the name specified in the Output File Name field, with the addition of an extension identifying the type of output it contains.


Save Output
Clear Output
Multiple output files saved, click on the links below to open:
file://C:\Documents and Settings\nicole\My Documents\CRSPSift\indquery_dlvl.xlsx
file://C:\Documents and Settings\nicole\My Documents\CRSPSift\indquery_indhr.xlsx

Clicking one of the output files links opens the File Download dialog box.


File Download
Do you want to open or save this file?
Name: indquery_dlvl.xlsx
Type: Microsoft Office Excel Worksheet, 9.27 KB
From: C:\Documents and Settings\nicole\My Documents\...
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

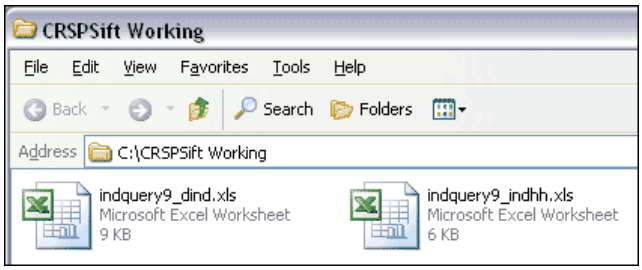
Click Open to open the output file in the appropriate application (Excel 2007, in the example shown below).


indquery_dlvl

	A	B	C	D	E	F	G
1	yindno	Caldt	Tind	Aind	Iind	Usdcnt	Usdval
2	1E+06	1/2/2009	2708.00122	812.653076	333.25592	2191	9.16E+09
3	1E+06	1/5/2009	2707.7124	812.558167	333.259308	2190	9.43E+09
4	1E+06	1/6/2009	2735.65283	820.932007	333.263733	2189	9.42E+09
5	1E+06	1/7/2009	2653.48779	795.870361	333.428162	2189	9.52E+09
6	1E+06	1/8/2009	2666.40942	799.711914	333.442444	2190	9.23E+09
7	1E+06	1/9/2009	2610.29565	782.871887	333.446747	2187	9.27E+09
8	1E+06	1/12/2009	2541.15332	762.133057	333.44754	2187	9.08E+09
9	1E+06	1/13/2009	2549.72388	764.624695	333.482025	2187	8.84E+09

Alternatively, you can click the View Output button, located in the CRSPSift toolbar, to view the output files generated by your query.

If a query generated only one file, the target application will open the file directly, as shown above. If the query resulted in multiple output files, however, instead of opening the files, CRSPSift will open a Windows Explorer window showing the folder where you chose to save output.



OUTPUT FILE SUFFIXES

The following table lists output file suffixes and the type of data they indicate is contained in a file.

	OUTPUT FILE SUFFIX	
INDIVIDUAL TIME SERIES	**DAILY**	**MONTHLY**
	Dind	mind
PRE-DEFINED TIME SERIES	**DAILY**	**MONTHLY**
Index Levels, used counts and values	dlvl	mlvl
Index returns, used counts, and values	dret	mret
Index counts and values	dval	mval

CHAPTER 6: CCMQUERY: CRSP/COMPUSTAT MERGED DATABASE ACCESS

CCMQuery provides access to Compustat data for all securities in the Compustat universe as well as linking information for those securities also in the CRSP Universe.

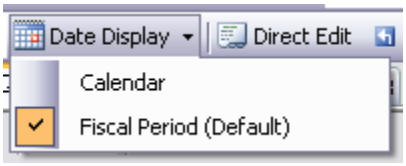
Click the New Query button on the CRSPSift toolbar. Select a data environment that includes a CRSP/Compustat database. Highlight the CCMQuery icon, enter a descriptive name, and then click the OK button.

THE CCMQUERY TOOLBAR

First specify a date range for your query. Enter dates using one of the following formats: YYYYMM, or YYYY. The following table shows some examples of how to use the various formats.

START	END	RESULT
199609	199612	All data from the beginning of Septemper through December of 1996
1990	(empty)	All data in the year 1990

Next, from the Date Display menu, choose either Fiscal Period (the default) or Calendar.



COMPANY SELECTION

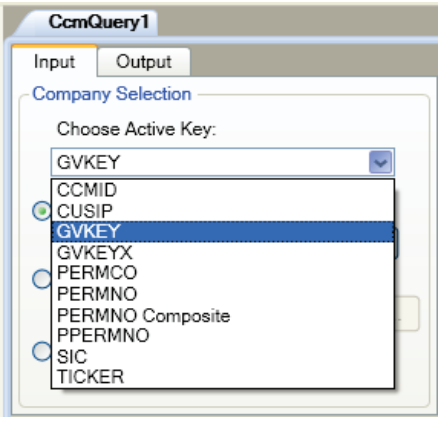
Entities in the CCM Database are accessed by:

- GVKEY - company identifier
- GVKEY.IID - security identifier
- GVKEYX - index

Securities linked with CRSP can be accessed by CRSP identifiers also (PERMNO and variations, PERMCO).

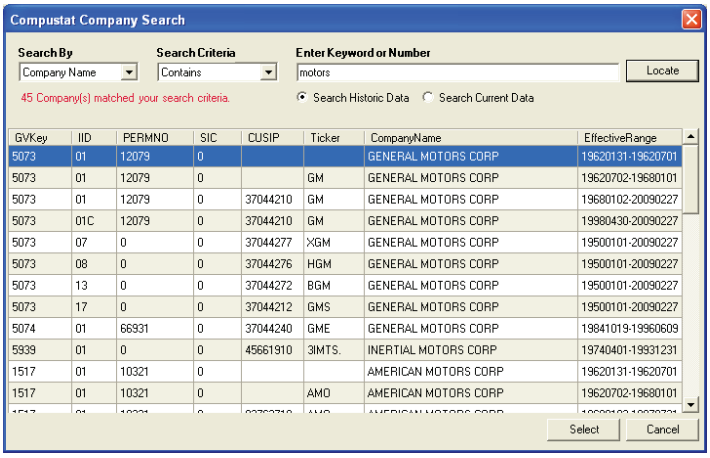
Each GVKEY has associated with it a primary issue. When using GVKEY with no IID, CCMQuery will automatically attach the IID of the primary isssue, most often .01.

From the drop-down menu in the Company Selection area, specify the key type you wish to use.



Next, identify the issue or companies of interest. If you know an identifier, enter it directly. For example, the GVKEY of Apple Computer is 1690. Given that knowledge, you can set the key to GVKEY and enter 1690 as the identifier.

If you do not know an identifier, click the Find... button to open the Company Lookup window.


Compustat Company Search
Search By
Company Name
Search Criteria
Contains
Enter Keyword or Number
motors
Locate
45 Company(s) matched your search criteria.
Search Historic Data
Search Current Data
GVKey IID PERMNO SIC CUSIP Ticker CompanyName EffectiveRange
5073 01 12079 0 GENERAL MOTORS CORP 19620131-19620701
5073 01 12079 0 GM GENERAL MOTORS CORP 19620702-19680101
5073 01 12079 0 37044210 GM GENERAL MOTORS CORP 19680102-20090227
5073 01C 12079 0 37044210 GM GENERAL MOTORS CORP 19980430-20090227
5073 07 0 0 37044277 XGM GENERAL MOTORS CORP 19500101-20090227
5073 08 0 0 37044276 HGM GENERAL MOTORS CORP 19500101-20090227
5073 13 0 0 37044272 BGM GENERAL MOTORS CORP 19500101-20090227
5073 17 0 0 37044212 GMS GENERAL MOTORS CORP 19500101-20090227
5074 01 66931 0 37044240 GME GENERAL MOTORS CORP 19841019-19960609
5939 01 0 0 45661910 3IMTS. INERTIAL MOTORS CORP 19740401-19931231
1517 01 10321 0 AMERICAN MOTORS CORP 19620131-19620701
1517 01 10321 0 AMO AMERICAN MOTORS CORP 19620702-19680101
Select
Cancel

Use the search form to locate a particular company in the CCM database. Companies matching your search criteria appear in a table, initially sorted by GVKEY, then by IID. If your search yields many matches, click the column labels to re-sort the table in the order most useful to you. When you have found the company you want, click its row in the table, and then click the Select button. The GVKEY of that company will appear in the identifier field.

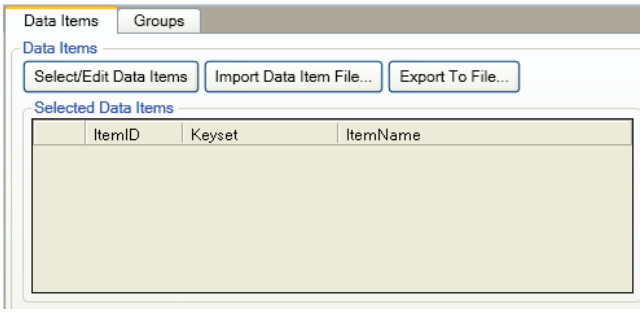
Queries can be run against the full universe by selecting All Issues, or by creating a list of keys and selecting Input File. To use an input file, create a text file with an entry for each company, one per row, using the active key you selected. For example, to search for Apple and Microsoft by GVKEY using an input file, select GVKEY from the Active Key menu.

Next create and save the following two line text file:

```
1690
12141
```

If the IID is not explicitly provided, the primary issue default will be applied. Click Input File in the Company Selection area, and then click the Browse... button to locate the input file you created.

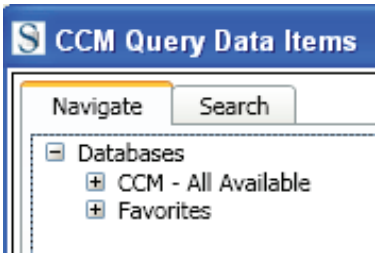
DATA ITEMS AND GROUPS



Compustat data may be accessed either by selecting and combining individual data items in a query, or by selecting pre-defined groups of data items.

DATA ITEMS

Click on Select/Edit Data Items to open a screen that offers two categories: Compustat data items and Favorites.

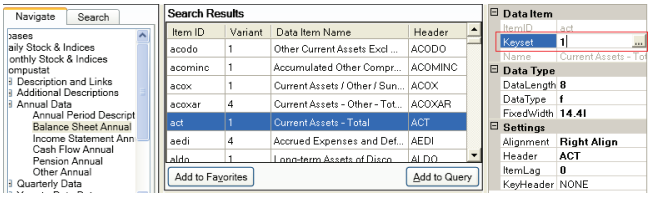


Expand the Compustat data items category (CCM-All Available) to see categories of Compustat data items.

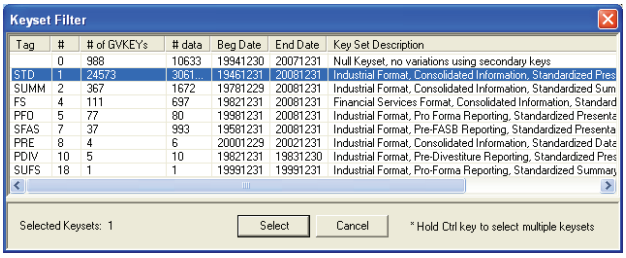
Select Subgroups within the categories and view items within each of the subgroups. When you select a subgroup, a list of its items appears in the Search Results area. Further details about the selected item are shown in the area to the right of the Search Results. Highlight items to be added to your query and click the Add to Query button. Added items appear in the Query Items section of the screen.

KEYSETS

Keysets are CRSP-created groups of Compustat secondary keys that are used to further define Compustat data items. CRSP has identified a default keyset for each data item. Sift allows you to override the default keysets, or select multiple keysets in Sift.



On the Data Items screen, clicking on the Keyset box opens a table of all existing keysets for the items with statistics about each. The default keyset is highlighted upon opening the box and is typically STD, or Standard. The Keyset number is provided, the number of GVKEYs, the number of data points, the date range populated by the data, and a description of the Keyset.


Keyset Filter
Tag
#
# of GVKEYs
data
Beg Date
End Date
Key Set Description
0 988 10633 19941230 20071231 Null Keyset, no variations using secondary keys
STD 1 24573 3061... 19461231 20081231 Industrial Format, Consolidated Information, Standardized Pres
SUMM 2 367 1672 19781229 20081231 Industrial Format, Consolidated Information, Standardized Sum
FS 4 111 697 19821231 20081231 Financial Services Format, Consolidated Information, Standard
PFO 5 77 80 19981231 20081231 Industrial Format, Pro Forma Reporting, Standardized Presenta
SFAS 7 37 993 19581231 20081231 Industrial Format, Pre-FASB Reporting, Standardized Presenta
PRE 8 4 6 20001229 20021231 Industrial Format, Consolidated Information, Standardized Data
PDIV 10 5 10 19821231 19831230 Industrial Format, Pre-Divestiture Reporting, Standardized Pres
SUFS 18 1 1 19991231 19991231 Industrial Format, Pro-Forma Reporting, Standardized Summary
Selected Keysets: 1
Select
Cancel
* Hold Ctrl key to select multiple keysets

Choose different or additional keysets and click the Select button to close the window.

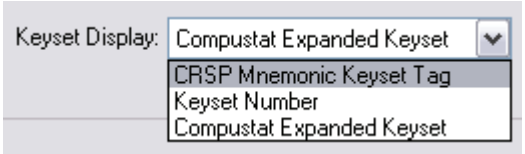
Keyset Display

Compustat data items can be qualified by a set of secondary keys. For example, the data item SALE has secondary keys for industry format, data format, population source, and consolidation level. A different value of company sales can be available for different combinations of these keys, such as a combination

that represents the originally reported sales or the final restated sales from a later filing.

CRSP calls these collections of keys and values a keyset and assigns a numeric code and mnemonic tag to each unique collection. Each of these represents different output series. When multiple keysets are available the user can specify both the item and keyset to identify the series of interest, or use the default preset combination most commonly used.

The Keyset Display drop-down menu in CCMQuery's Output tab affects how a data item's keyset is represented in query output.



Options include CRSP Mnemonic Keyset Tag, Keyset Number, and Compustat Expanded Keyset. The following examples illustrate these options using Microsoft Excel output.

CRSP Mnemonic Keyset Tag

Output represents the item's keyset using a mnemonic tag assigned by CRSP.

KYGVKEY	KEYSET_TAG	FYYYY	FYRA	SALE
1690	STD	2005	9	13931
1690	STD	2006	9	19315
1690	STD	2007	9	24006

Keyset Number

Output represents the item's keyset using a keyset number assigned by CRSP.

KYGVKEY	KEYSET	FYYYY	FYRA	SALE
1690	1	2005	9	13931
1690	1	2006	9	19315
1690	1	2007	9	24006

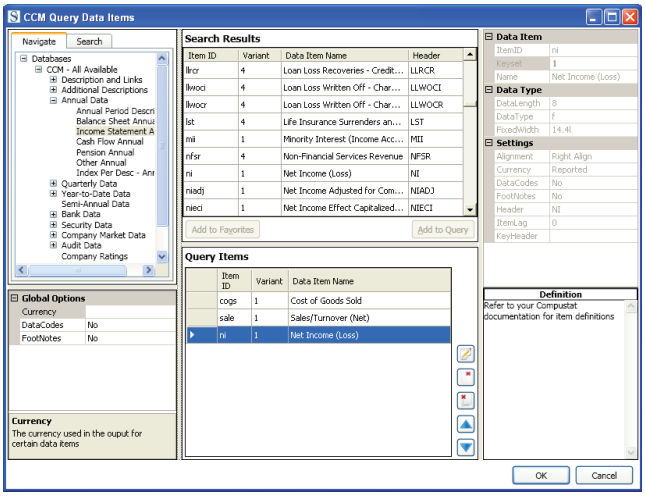
Compustat Expanded Keyset

Each component of the item's keyset is broken out into its own column in output.

KYGVKEY	CONSOL	DATAFMT	INDFMT	POPSRC	FYYYY	FYRA	SALE
1690	C	STD	INDL	D	2005	9	13931
1690	C	STD	INDL	D	2006	9	19315
1690	C	STD	INDL	D	2007	9	24006

FAVORITES

If you find that you commonly use a certain subset of items, at any time, you may highlight them and click the Add to Favorites button. Favorites is a user-created category designed to house these commonly accessed data items. It allows storage of Daily and Monthly CRSP stock items as well as Compustat data items.

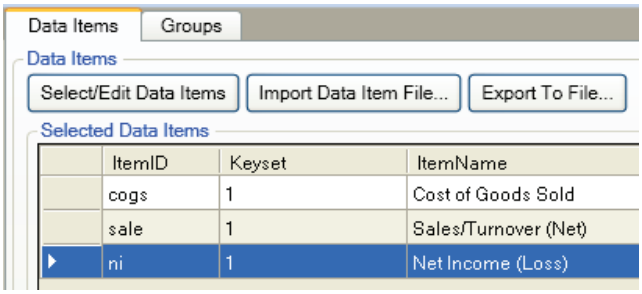


To control the order in which your report will display data items, use the up and down arrows to the right of the Query Items list. Click an item and then click the up or down arrow to reorganize the list. To remove an item or group of items, select them from the list and click the X button, located above the arrow buttons.

Select Global Item Options to include Footnotes or Data Code items for those items that have them, and to change the default from providing output in its Reported Currency to converting it to US Dollars.

When items and options are selected, click on OK to return to the main CCMQuery screen. Selected items appear in the Screen.

Note: Global options must be set prior to selecting data items in order for them to be applied.



IMPORTING DATA ITEMS FROM A FILE

Instead of choosing data items using the item selection screen, you can import a set of data items from a text file. To do so, click "Import Data Item File..." The file should contain one data item per line, in the format `itemid.<keyset>`. Keyset number is optional; the item's default keyset will be used if it is omitted, as for the data item `filedate` in the following example.

```
ofid.0
ofcd.0
ofnm.0
filedate
sale.5
```

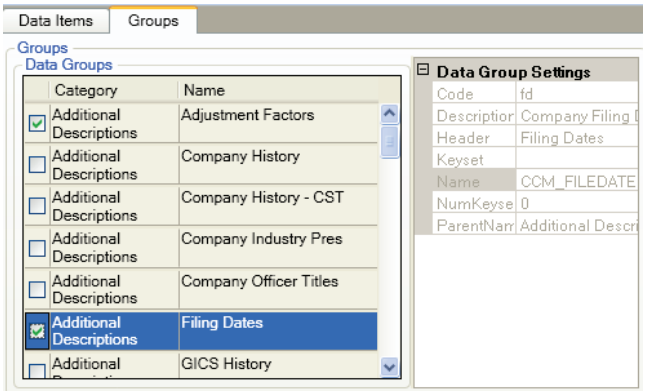
Imported items will be added below any items already present in the Selected Data Items list.

EXPORTING DATA ITEMS TO A FILE

Click "Export To File..." to export items in the Selected Data Items list to a text file in the format described above.

GROUPS

Click on the Groups tab to view choices of pre-defined groups of Compustat data.

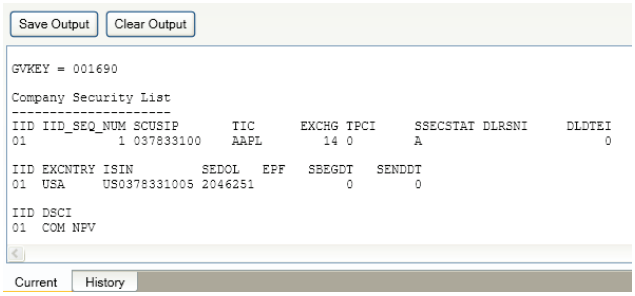


Groups provide a convenient way to select multiple related data items at once. For example, there are five items related to Filing Dates data. These items are found under the Filing Dates sub-category of the Additional Descriptions category in the data items selection screen. There you can add each of the five items to your query, one by one. That method is best if you want to modify properties (such as keyset or output header) of some but not all items.

Alternatively, you could add all five items at once by selecting Filing Dates under the Groups tab. This is an efficient way of selecting multiple items if you intend to apply the same properties to all items in the group.

OUTPUT TO SCREEN

The default option is text-based, formatted to fit the screen width specified in the Width control. 80 characters is the default width. Screen output appears in the hopper at the bottom of the CCMQuery window.



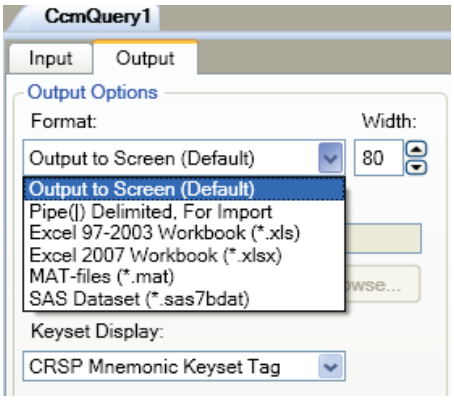
By default, the output of the last query execution is shown in the Current tab. The Save Output and Clear Output buttons at the top of the output area allow you to save output to a text file or to clear it away. Clicking the History tab shows you the output of every query execution since the session was opened.

When you switch to the query history view, the buttons above the output area change to Save History and Clear History. Save History allows you to capture the output of an entire session. You can select a different key (GVKEY or PERMNO, for example), or different data or options related to the same key. Each time you click Execute the new output is saved in the history. Then, by clicking Save History, you can save all the output to one text file.

OUTPUT TO FILE

You can also save data in a number of external file formats. When you choose a non-screen format, the Output File Name field becomes active and is required.

Click the Browse button to select a location to save the file.



SUPPORTED FILE FORMATS

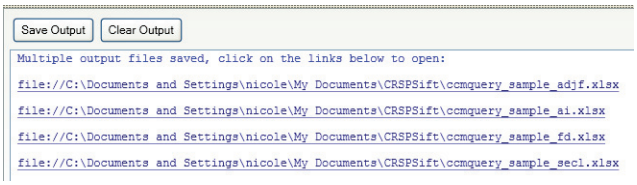
Pipe(|) Delimited, For Import - pipe-delimited ASCII text, suitable for importing into databases or software packages not directly supported by CRSPSift. This option generates a single output file.

Excel 97-2003 Workbook (*.xls) - Excel version 8. Note: Excel version 8 has a row limit of 65536 total rows. If a query generates more than that number of rows, the output will be truncated at the row limit.

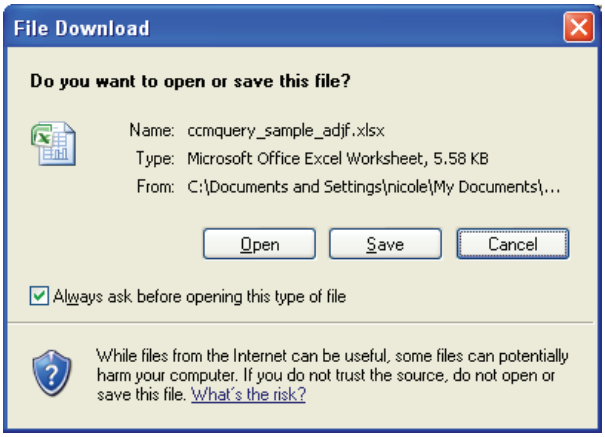
- **Excel 2007 Workbook (*.xlsx)** - Excel XML
- **MAT-files (*.mat)** - Matlab version 7
- **SAS Dataset (*.sas7bdat)** - SAS version 7
- **Stata File** (*.dta)
- **SPSS File** (*.sav)

VIEWING OUTPUT FILES

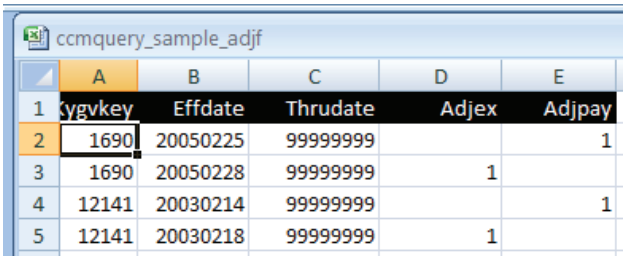
If you select a non-screen output format, CCMQuery will generate one or more output files, one for each unique output of the query. When the query completes execution, the output area displays links to the generated output files. Each file will have the name specified in the Output File Name field, with the addition of an extension identifying the type of output it contains (for example, "fd" for Filing Dates data, or "adjf" for Adjustment Factors data).


Save Output
Clear Output
Multiple output files saved, click on the links below to open:
file://C:\Documents and Settings\nicole\My Documents\CRSPSift\ccmquery_sample_adjf.xlsx
file://C:\Documents and Settings\nicole\My Documents\CRSPSift\ccmquery_sample_ai.xlsx
file://C:\Documents and Settings\nicole\My Documents\CRSPSift\ccmquery_sample_fd.xlsx
file://C:\Documents and Settings\nicole\My Documents\CRSPSift\ccmquery_sample_secl.xlsx

Clicking one of the output files links opens the File Download dialog box.


File Download
Do you want to open or save this file?
Name: ccmquery_sample_adjf.xlsx
Type: Microsoft Office Excel Worksheet, 5.58 KB
From: C:\Documents and Settings\nicole\My Documents\...
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

Click Open to open the application and output file to which the data items were written.



OUTPUT FILE SUFFIXES

The following table lists output file suffixes and the type of data they indicate is contained in a file.

DATA CATEGORY	DATA GROUP NAME	OUTPUT FILE SUFFIX
Additional Descriptions	Adjustment Factors	adjf
Additional Descriptions	Company History	hcom
Additional Descriptions	Company History – CST	hcst
Additional Descriptions	Company Industry Pres	ipcd
Additional Descriptions	Company Officer Titles	off
Additional Descriptions	Filing Dates	fd
Additional Descriptions	GICS History	hgic
Annual Data	Index Per Desc – Annl	xades
Audit Data	Audit Data – Annl	aaud
Audit Data	Audit Data –Qtr	iaud

DATA CATEGORY	DATA GROUP NAME	OUTPUT FILE SUFFIX
CCM – Common Subsets	Company Summary	cos
CCM – Common Subsets	Period Summary – Annl	pa
CCM – Common Subsets	Period Summary – Qtr	pq
Company Market Data	Fortune 500 Data	fo
Company Market Data	Market Data – Annl	amkt
Company Market Data	Market Data – Qtr	imkt
Description and Links	CCM Header and Ranges	mstr
Description and Links	Company Description	com
Description and Links	Company Security List	secl
Description and Links	Index Header	in
Description and Links	Index Header – pre GICS	spind
Description and Links	Link History	link
Description and Links	Link Used	ulink
Description and Links	Link Used Ranges	lnkrng
Operating Segment	Segment Currency	test_sr
Operating Segment	Segment Customer	test_sc
Operating Segment	Segment Detail	test_sd
Operating Segment	Segment Geographic Area	test_sg
Operating Segment	Segment Item	test_sm
Operating Segment	Segment NAICS	test_sy
Operating Segment	Segment Product	test_sp
Operating Segment	Segment Source	test_ss
Quarterly Data	Index Per Desc – Qtr	test_xqdes
Security Data	Security – Constituents	test_hidx
Security Data	Security – Dividend FN	test_divfn
Security Data	Security – Header	test_sec
Security Data	Security – Header Hist	test_hsec
Security Data	Security – S&P	test_sind
Security Data	Security – S&P Constit	test_idx
Security Data	Security – Split Ev FN	test_sptfn
Security Data	Security – Split Events	test_spt

CHAPTER 7: TRSQUERY: TREASURIES DATA ACCESS

CRSPSift's TrsQuery tool is used to access CRSP Daily and Monthly US Treasuries Data. Individual treasury issues and a variety of treasury series are available.

QUERY DATE RANGE SPECIFICATION

Locate the TrsQuery toolbar below the main CRSPSift toolbar.

Specify a date range. Enter dates using one of the following formats: YYYYMMDD, YYYYMM, or YYYY. The following table provides examples of how to use the various formats.

START	END	RESULT
199609	199612	all data from the beginning of September through December of 1996
1990	(empty)	all data in the year 1990
1994	19940615	all data from the beginning of 1994 until June 15, 1994
19961231	(empty)	data only on the date December 31, 1996

By default, TrsQuery returns data from the last three months of the CRSP database included in your query's Environment. For more information on Environments, see Chapter 8: Environments.

TREASURY SELECTION

SELECTING A KEY TYPE

Select what type of key your query will use from the Choose Key Type drop-down menu in the Treasury Selection area. Available keys are:

TREASNO - (default) CRSP's Unique US Treasury Number Identifier can be used to access individual issues. TREASNOs are 6-digit numbers between 200001 and 206341.

CUSIP - Treasury CUSIP. The Committee on Uniform Security Identification Procedures began assigning CUSIP identification numbers in 1968. Issues that matured prior to 1968 are assigned the value OXX. The earliest maturity in the file with a CUSIP is February 15, 1969.

CRSPID - The CRSP Issue Identification Number in the format YYYYMMDD. TCCCCE, where:

YYYY	Maturity Year
MM	Maturity Month
DD	Maturity Day
T	Type of Issue (TYPE)
CCCC	Integer part of Coupon Rate (COUPRT * 100)
E	Uniqueness Number (UNIQ)

For example, 19850515.504250 identifies a 4¼% callable bond which matures May 15, 1985.

TREASNOX - CRSP's Unique US Treasury Index Number Identifier. Index TREASNOX's are 7-digit numbers between 2000001 and 2000069. The complete list of treasuries indexes is below:

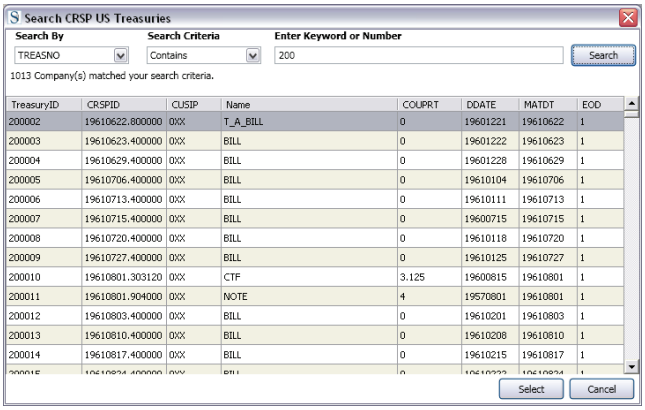
TREASNOX	TERM TYPE DESCRIPTION
INDEX FAMILY: RISKFREE **RISKFREE**	
2000001	Risk-Free Rates – 1 Month
2000002	Risk-Free Rates – 3 Month
RISKFREE2	
2000061	Risk Free 4-Week
2000062	Risk Free 13-Week
2000063	Risk Free 26-Week
INDEX FAMILY: FIXEDTERM **FIXED TERM**	
2000003	1 Year Bonds, Start Date 1/31/1941
2000004	2 Year Bonds, Start Date 1/31/1941
2000005	5 Year Bonds, Start Date 4/30/1941
2000006	7 Year Bonds, Start Date 4/30/1941
2000007	10 Year Bonds, Start Date 5/31/1941
2000008	20 Year Bonds, Start Date 1/31/1942
2000009	30 Year Bonds, Start Date 11/29/1941

TREASNOX	TERM TYPE DESCRIPTION
INDEX FAMILY: TERMSTRUCT **FAMA TERM STRUCTURE**	
2000010	Fama 12 Month T-Bills – 1 Month
2000011	Fama 12 Month T-Bills – 2 Month
2000012	Fama 12 Month T-Bills – 3 Month
2000013	Fama 12 Month T-Bills – 4 Month
2000014	Fama 12 Month T-Bills – 5 Month
2000015	Fama 12 Month T-Bills – 6 Month
2000016	Fama 12 Month T-Bills – 7 Month
2000017	Fama 12 Month T-Bills – 8 Month
2000018	Fama 12 Month T-Bills – 9 Month
2000019	Fama 12 Month T-Bills – 10 Month
2000020	Fama 12 Month T-Bills – 11 Month
2000021	Fama 12 Month T-Bills – 12 Month
2000022	Fama 6 Month T-Bills – 1 Month
2000023	Fama 6 Month T-Bills – 2 Month
2000024	Fama 6 Month T-Bills – 3 Month
2000025	Fama 6 Month T-Bills – 4 Month
2000026	Fama 6 Month T-Bills – 5 Month
2000027	Fama 6 Month T-Bills – 6 Month
INDEX FAMILY: BONDMAPORT **FAMA BOND PORTFOLIO RETURN**	
2000028	Fama BondPort Return – 6Mo Range <=6Month
2000029	Fama BondPort Return -6Mo Range <=12Month
2000030	Fama BondPort Return -6Mo Range <=18Month
2000031	Fama BondPort Return -6Mo Range <=24Month
2000032	Fama BondPort Return -6Mo Range <=30Month
2000033	Fama BondPort Return -6Mo Range <=36Month
2000034	Fama BondPort Return -6Mo Range <=42Month
2000035	Fama BondPort Return -6Mo Range <=48Month
2000036	Fama BondPort Return -6Mo Range <=54Month
2000037	Fama BondPort Return -6Mo Range <=60Month
2000038	Fama BondPort Return > 60 <= 120 Month
2000039	Fama BondPort Return > 120 Month
2000040	Fama BondPort Return -12Mo Range <=12Month
2000041	Fama BondPort Return -12Mo Range <=24Month
2000042	Fama BondPort Return -12Mo Range <= 36Month
2000043	Fama BondPort Return -12Mo Range <= 48Month
2000044	Fama BondPort Return -12Mo Range <= 60Month
2000045	Reserved for future use – Duplicate of 2000038
2000046	Reserved for future use – Duplicate of 2000039
INDEX FAMILY: DISCBOND **FAMA-BLISS DISCOUNT BONDS**	
2000047	Fama Bilss Discount Bonds 1 Year
2000048	Fama Bilss Discount Bonds 2 Year
2000049	Fama Bilss Discount Bonds 3 Year
2000050	Fama Bilss Discount Bonds 4 Year
2000051	Fama Bilss Discount Bonds 5 Year
INDEX FAMILY: RATES **RATES**	
2000052	1-Month Certificate of Deposit Rate
2000053	3-Month Certificate of Deposit Rate
2000054	6-Month Certificate of Deposit Rate
2000055	30-Day Commercial Paper Rate
2000056	60-Day Commercial Paper Rate
2000057	90-Day Commercial Paper Rate
2000058	Federal Funds Effective Rate
2000059	Federal Funds Minimum Trading Range
2000060	Federal Funds Maximum Trading Range

ENTERING A KEY VALUE

Identify the treasury or treasuries of interest. There are three ways to specify a key value. First, if you know the key value you want, you can type it directly in the text field. Another option is to browse the database sequentially. Use the arrow buttons to the right of the Find... button to step through the database in the order of the key type you have chosen. Finally, the Find... button opens the Treasuries Search window, where you can use a search form to locate a particular treasury in the CRSP database.

USING THE TREASURIES SEARCH WINDOW



If you have selected TREASNOX as your query's key type, you can search by partial or complete TREASNOX, Index Family, or Term Type Description.

If you have chosen any of the other three key types, search the Treasuries Search window by one of the following criteria: TREASNO, CRSPID, CUSIP, Date Issued, or Maturity Date.

Treasuries matching your search criteria appear in a table in the main area of the window. If your search yields many matches, click the column labels to re-sort

the table in the order most useful to you. When you have found the treasury you want, click its row in the table, and then click the Select button. Its TREASNO will appear in the identifier field of the Input tab.

ACCESSING ALL TREASURIES

To access all treasuries in the database, select the All Treasuries radio button.

USING AN INPUT FILE

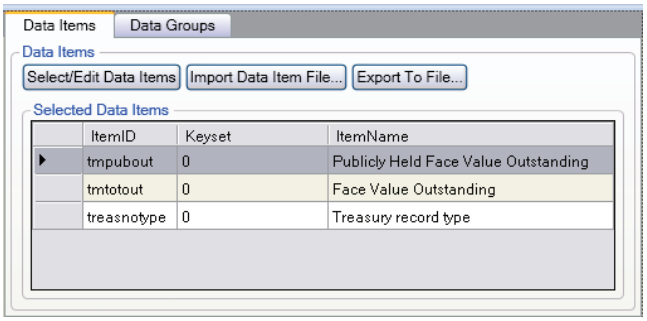
Finally, you may choose to access only certain treasuries specified in an input file. To use an input file, first create a plain text file (using the Microsoft Windows Notepad accessory, for instance) with an entry for each treasury, one per row, using the key type of your choice. For example, to access four particular treasuries by TREASNO, create the following four line file:

```
200007
200014
200158
200161
```

Save the file in your data environment's working directory. Next, Click the Input File option in the Treasury Selection area, and then click the Browse... button to locate the input file you created. The Browse window opens automatically to the working directory. Now select the preferred key type from the Choose Key Type menu.

DATA ITEM SELECTION

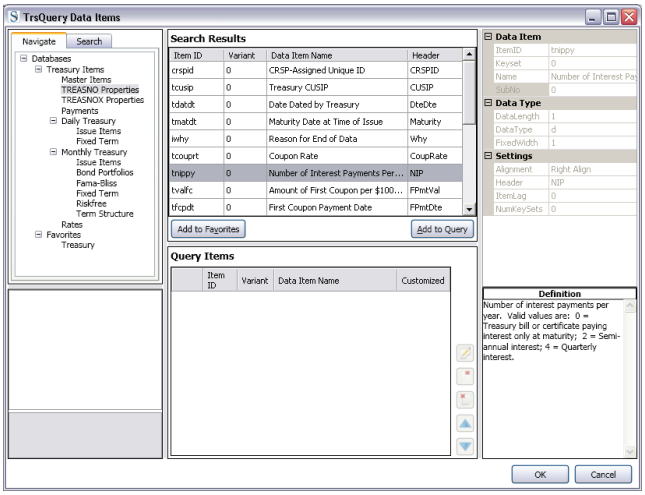
Use the Data Items tab to control what individual data items your query will use. Any items you have chosen appear in the Selected Data Items table.



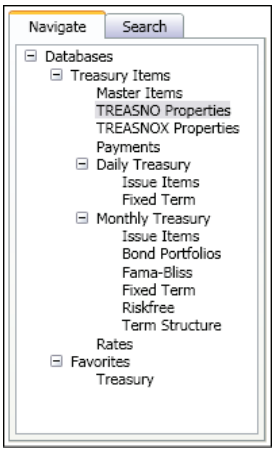
SELECT/EDIT DATA ITEMS

Clicking this button launches the interface for selecting individual items in TrsQuery.

Note: For complete definitions of data items and calculations employed by the CRSP US Treasury Databases, refer to the Treasury Guide at http://www.crsp.chicagobooth.edu/documentation.



The TrsQuery Data Items window is divided into several areas. Items are divided into logical groups in the Navigate/Search area.



Clicking the name of a group causes its constituent data items to appear in the Search Results area. Or, rather than browsing by category, click the Search tab. There you can enter a descriptive keyword (e.g., "return") to find items of interest. Navigate and Search both result in found data items appearing in the Search Results area of the window.

Search Results

Item ID	Variant	Data Item Name	Header
tdretadj	0	Adjusted Return	RETADJ
tdretnua	0	Unadjusted Return	RETNUA
tmaskret	0	Hold ask return	ASKRET
tmaveret	0	Hold average return	AVERET
tmbidret	0	Hold bid return	BIDRET
tmretadj	0	One Month Holding Period Return	RETADJ
tmretnua	0	Unadjusted Return	MRETNUA
tmretnxs	0	Adjusted Return	RETNXS

Add to Favorites | Add to Query

When you highlight an item in the Search Results area, its attributes and a short text description appear in the right panel of the screen.

Data Item	
ItemID	tdretadj
Keyset	0
Name	Adjusted Return
SubNo	0
Data Type	
DataLength	14
DataType	f
FixedWidth	14.4l
Settings	
Alignment	Right Align
Header	RETADJ
ItemLag	0
NumKeySets	0

Select each item you want in your query, and click the Add to Query button to add it to the Query Items area below the Search Results.

Query Items

	Item ID	Variant	Data Item Name	Customized
▶	tmpubout	0	Publicly Held Face Value Out…	Yes
	tmtotout	0	Face Value Outstanding	Yes
	treasnotype	0	Treasury record type	Yes
	tdretadj	0	Adjusted Return	Yes

Items in the Query Items area appear in the order that they will appear in your query's output. To adjust the position of an item, select it and click the blue up and down arrows to move it up or down the list.

The other functions available are:

Edit. Click this to edit an item's attributes.

Remove the selected item from your query.

Remove all items from the Query Items list.

Click the OK button to confirm the addition of the selected items to your query. Click cancel to exit the TrsQuery Data Items window without making any changes.

Import Data Item File...

Clicking this button allows you to import a list of data items into your query from a user-created text file. A data item file is a plain text file containing a list of TrsQuery data ItemIDs, one per line. For example, in Notepad or another text editor, create a file with the following four lines:

```
treasno
tname
tdbid
tdask
```

Save the file as trsimport.txt in your CRSPSift working directory. Now click the Import Data Item File... button and select trsimport.txt. The data items listed in the file will be added your query.

Export to File...

Use this option to output the Selected Data Items list to a text file containing each item's mnemonic ItemID. This text file may then be imported into other queries using the Import Data Item File... button.

DATA GROUPS

The Data Groups tab allows you to select clusters of related data items, saving you the time of selecting and adjusting a group's items individually.

The following data groups are available in TrsQuery. Groups correspond to the item groupings of the tree navigation structure in the TrsQuery Data Items

window. Some data groups apply to individual treasury issues, while others apply to treasury series. The table indicates to which category a group applies.

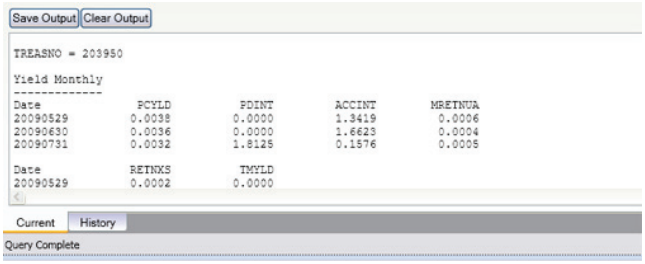
DATA GROUP	AGGREGATE SERIES	ISSUE
DAILY TREASURY ITEMS		
Index Daily	x	
Quote Daily		x
Yield Daily		x
FIXED TERM		
Fixed Term Header	x	
Fixed Term Timeseries	x	
MONTHLY TREASURY ITEMS		
Fama Bond	x	
Fama-Bliss Discount	x	
Fama-Bliss Riskfree	x	
Index Monthly	x	
Quote Monthly		x
Term Struct	x	
Yield Monthly		x
RATES		
Rates Header	x	
Rates Timeseries	x	
TREASURY DESCRIPTIONS		
Daily Debt		x
Debt		x
Fixed Term	x	
Rates	x	
Treasury Index	x	
Treasury Issue		x
Treasury Master		x
Treasury Payments		x

OUTPUT OPTIONS

You can save the output of a TrsQuery in one of several formats. Click the Output tab to show the Output Options panel.

OUTPUT TO SCREEN

The default option is text-based output, formatted to fit the screen width specified in the Width control. 80 characters is the default output width. Screen output appears in the output area at the bottom of the TrsQuery window.

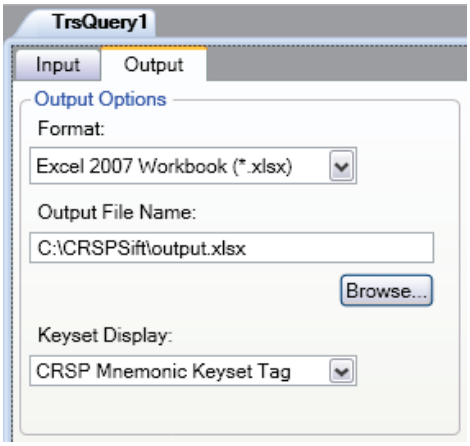


By default, the output of the last query execution is shown. The Save Output and Clear Output buttons at the top of the output area allow you to save output to a text file or to clear it away. Clicking the History tab shows you the output of every query execution since the query was opened.

When you switch to the query history view, the buttons above the output area change to Save History and Clear History. Save History allows you to capture the output of an entire session. You can select a new treasury, or different data or options related to the same treasury. Each time you click Execute the new output is saved in the history. Then, by clicking Save History, you can save all the output to one text file.

OUTPUT TO FILE

You can also save query output in a number of external file formats. When you choose a non-screen output format, the Output File Name field becomes active. In order to successfully execute the query, you must select a location to store the output file. Click the Browse button to select a location to save the file.



SUPPORTED FILE FORMATS

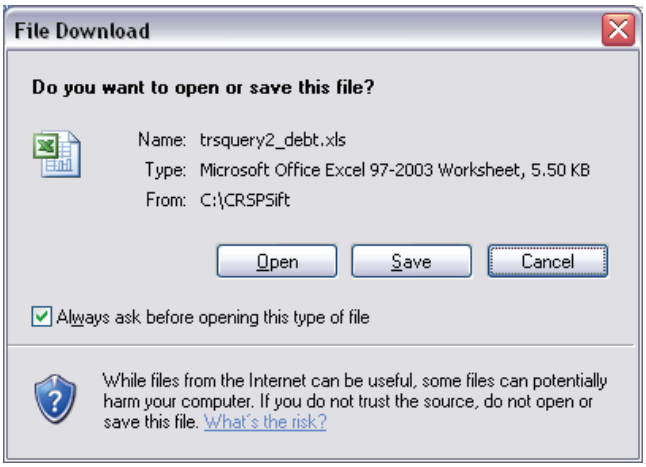
- **Pipe(|) Delimited, For Import** - pipe-deliimited ASCII text, suitable for importing into databases or software packages not directly supported by CRSPSift. This option generates a single output file.

- **Excel 97-2003 Workbook (*.xls)** - Excel version 8. **NOTE**: Excel version 8 has a row limit of 65536 total rows. If a query generates more than that number of rows, the output will be truncated at the row limit.
- **Excel 2007 Workbook (*.xlsx)** - Excel XML
- **MAT-files (*.mat)** - Matlab version 7
- **SAS Dataset (*.sas8bdat)** - SAS version 7
- **Stata File** (*.dta)
- **SPSS File** (*.sav)

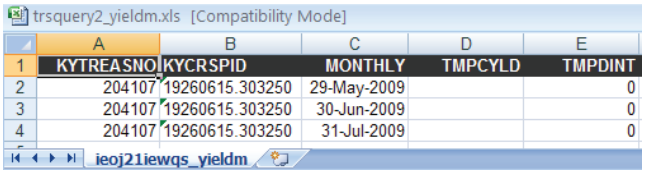
VIEWING OUTPUT FILES

If you select a non-screen output format, TrsQuery will generate one or more output files, one for each unique output format produced by the query. When the query completes execution, the output area displays links to the output files generated. Each file will have the name specified in the Output File Name field, with the addition of an extension identifying the type of output it contains.

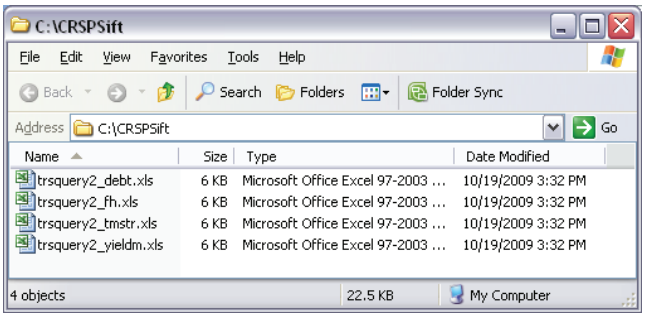
Clicking one of the output files links opens the File Download dialog box.


File Download
Do you want to open or save this file?
Name: trsquery2_debt.xls
Type: Microsoft Office Excel 97-2003 Worksheet, 5.50 KB
From: C:\CRSPSift
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

Click Open to open the output file in the appropriate application (Excel, in the example shown below).



Alternatively, you can click the View Output button, located in the CRSPSift toolbar, to view the output files generated by your query in Windows Explorer.


C:\CRSPSift
File Edit View Favorites Tools Help
Back Search Folders Folder Sync
Address C:\CRSPSift
Go
Name Size Type Date Modified
trsquery2_debt.xls 6 KB Microsoft Office Excel 97-2003 ... 10/19/2009 3:32 PM
trsquery2_fh.xls 6 KB Microsoft Office Excel 97-2003 ... 10/19/2009 3:32 PM
trsquery2_tmstr.xls 6 KB Microsoft Office Excel 97-2003 ... 10/19/2009 3:32 PM
trsquery2_yieldm.xls 6 KB Microsoft Office Excel 97-2003 ... 10/19/2009 3:32 PM
4 objects
22.5 KB
My Computer

OUTPUT FILE SUFFIXES

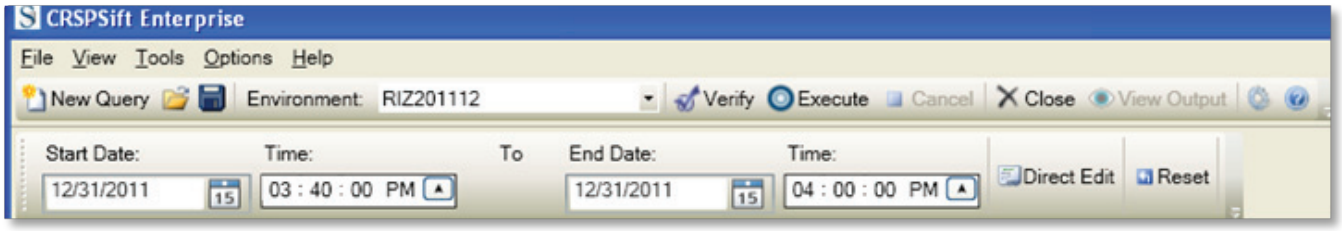
The following table lists output file extensions for each type of treasury data.

DATA GROUP	OUTPUT FILE SUFFIX
Treasury Master	tmstr
Treasury Issue	treas
Treasury Index	tidx
Treasury Payments	tpaymt
Yield Daily	yieldd
Quote Daily	quoted
Index Daily	indexd
Yield Monthly	yieldm
Quote Monthly	quotem
Index Monthly	indexm
Fama-Bliss Discount	fbdisc
Fama-Bliss Riskfree	fbrfree
Term Struct	term
Fama Bond	fbond
Debt	debt
Daily Debt	ddebt
Fixed Term	fterm
Fixed Term Header	fh
Fixed Term Timeseries	ds
Rates	rate
Rates Header	rh
Rates Timeseries	rs

CHAPTER 8: RIQUERY: RESEARCH INDEX DATA ACCESS

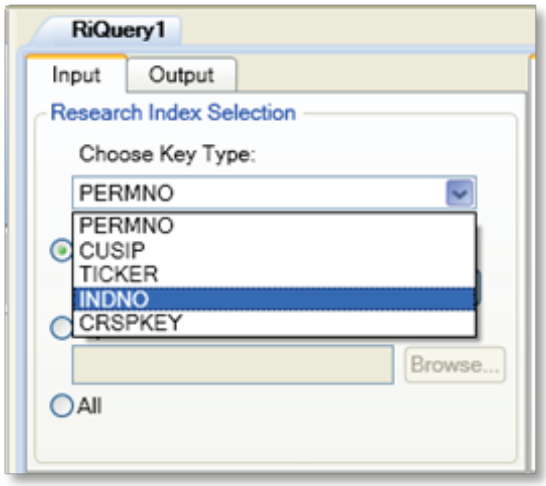
RIQuery is used to extract data from the new CRSP Research Index Database. Access is designed for intraday index history and index constituent security data as well as daily start and end of day values. CRSP Capitalizaiton, Sector, and eventually, Value/Growth indexes, constituents, and security data can be accessed individually, through a user-created input file, or for the full universe.

Locate the RIQuery toolbar below the main CRSPSift toolbar.



The menu bar for RIQuery differs from other Sift tools in that there is a time selection option to accommodate the intraday data. The default date that is set is for a single day for the most current valid trading day of the Research Index Database. The default time that is set is for the last 20 minutes of the trading day before the market close, based on a 9:30am – 4:00pm trading day. The time setting is relevant for the security Time Series Trading Detail Information and for the Index Value data. For daily data, time selection becomes irrelevant. Dates can be typed in manually or selected by clicking on the calendar icon to the right of the date fields.

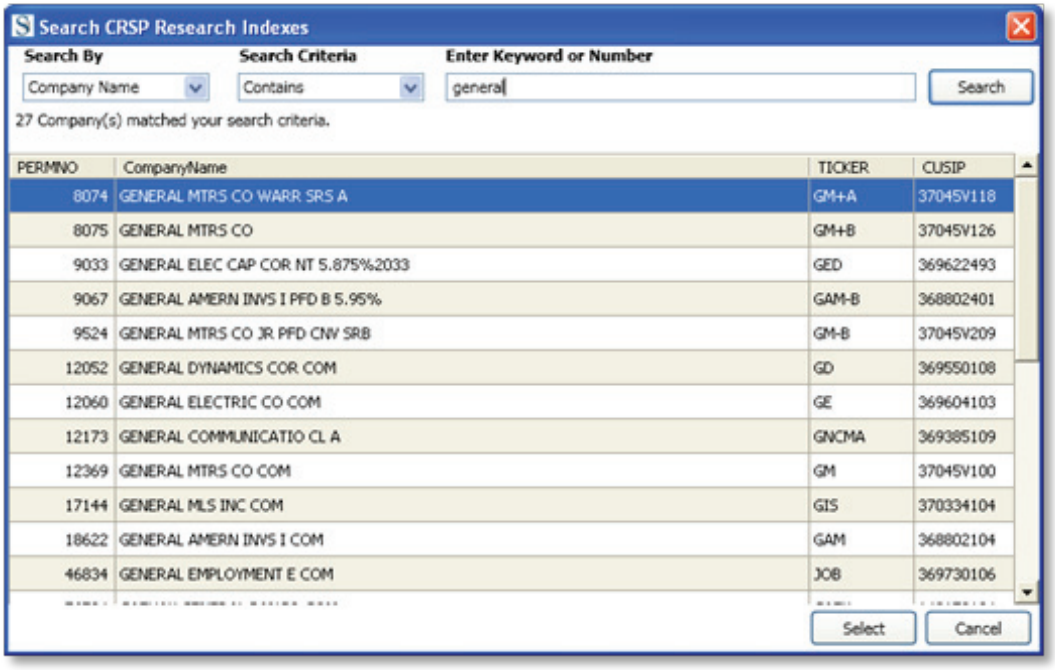
SECURITY SELECTION



From the Choose Selection Type drop-down menu in the Security Selection area, specify the key, such as PERMNO or INDNO, for use in your query. The key type that you select will limit your data item selection to those items that are relevant to the key. PERMNO will prevent access to index data items, INDNO will prevent access to security data. In cases where a query input file includes PERMNOs and INDNOs, CRSP introduces the selection option of CRSPKEY, which allows the selection of any data in the research database.

Next, identify the issue or issues of interest. If you know an identifier, you can enter it directly. For example, the ticker symbol of General Electric is GE. Given that knowledge, you can set the key to Ticker and type GE as the identifier.

If you do not know an identifier, click the Find... button to open the Company Search window. Searches for data in the Research Index Database are limited to PERMNOs and INDNOs for use as primary key selections.


Search CRSP Research Indexes
Search By
Search Criteria
Enter Keyword or Number
Company Name
Contains
general
Search
27 Company(s) matched your search criteria.
PERMNO
CompanyName
TICKER
CUSIP
8074 GENERAL MTRS CO WARR SRS A GM+A 37045V118
8075 GENERAL MTRS CO GM+B 37045V126
9033 GENERAL ELEC CAP COR NT 5.875%2033 GED 369622493
9067 GENERAL AMERN INVS I PFD B 5.95% GAM-B 368802401
9524 GENERAL MTRS CO JR PFD CNV SRB GM-B 37045V209
12052 GENERAL DYNAMICS COR COM GD 369550108
12060 GENERAL ELECTRIC CO COM GE 369604103
12173 GENERAL COMMUNICATIO CL A GNCMA 369385109
12369 GENERAL MTRS CO COM GM 37045V100
17144 GENERAL MLS INC COM GIS 370334104
18622 GENERAL AMERN INVS I COM GAM 368802104
46834 GENERAL EMPLOYMENT E COM JOB 369730106
Select
Cancel

Use the search form to locate a particular company in the CRSP database. Results of your search criteria appear in a table, initially sorted by key – PERMNO for securities, INDNO for indexes. If your search yields many matches, click the column labels to resort the table in the order most useful to you. When you have found the company you want, click its row in the table, and then click the Select button. The PERMNO of that company will appear in the identifier field.

You may also choose to access all issues in the database, or issues you specify through creating an input file. To search all issues, click All Issues in the Security Selection area. To use an input file, first create a plain text file (using the Microsoft Windows Notepad accessory, for instance) with an entry for each issue, one per row, using the active key of your choice.

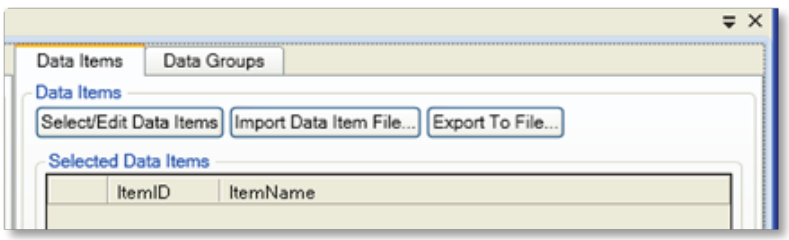
For example, to search for Apple and Microsoft by PERMNO using an input file, create and save the following two line text file:

14593
10107

Next, select PERMNO from the Active Key menu.

Click Input File in the Security Selection area, and then click the Browse... button to locate the file you created.

DATA ITEMS

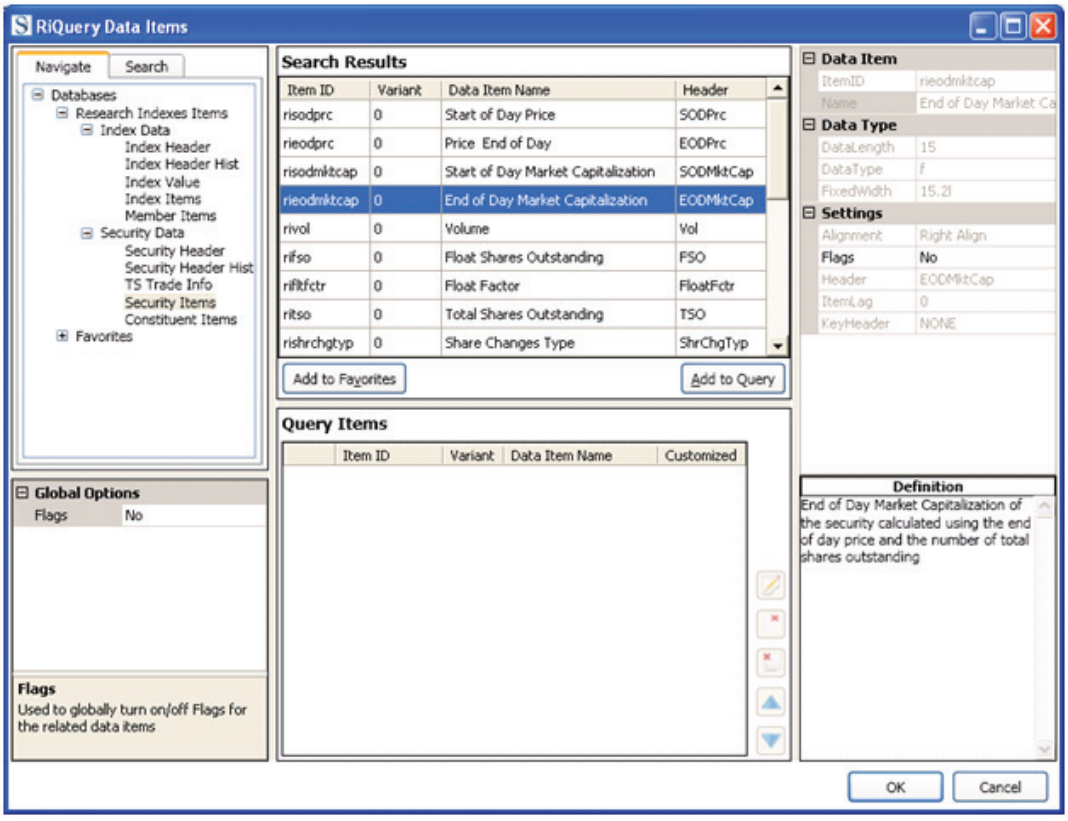


Data can be selected as either individual items going through the Data Items tab, or as preselected groups of logically categorized data by using the Data Groups tab.

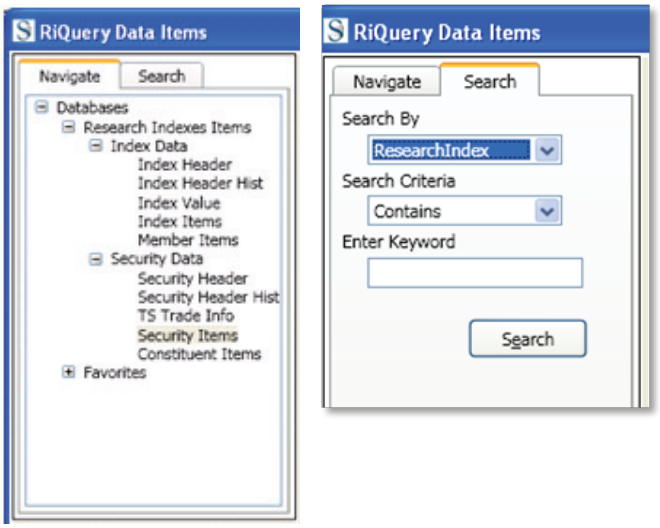
SELECT/EDIT DATA ITEMS

Clicking on the Select/Edit Data Items tab launches the interface for selecting individual event and time series items in RIQuery.

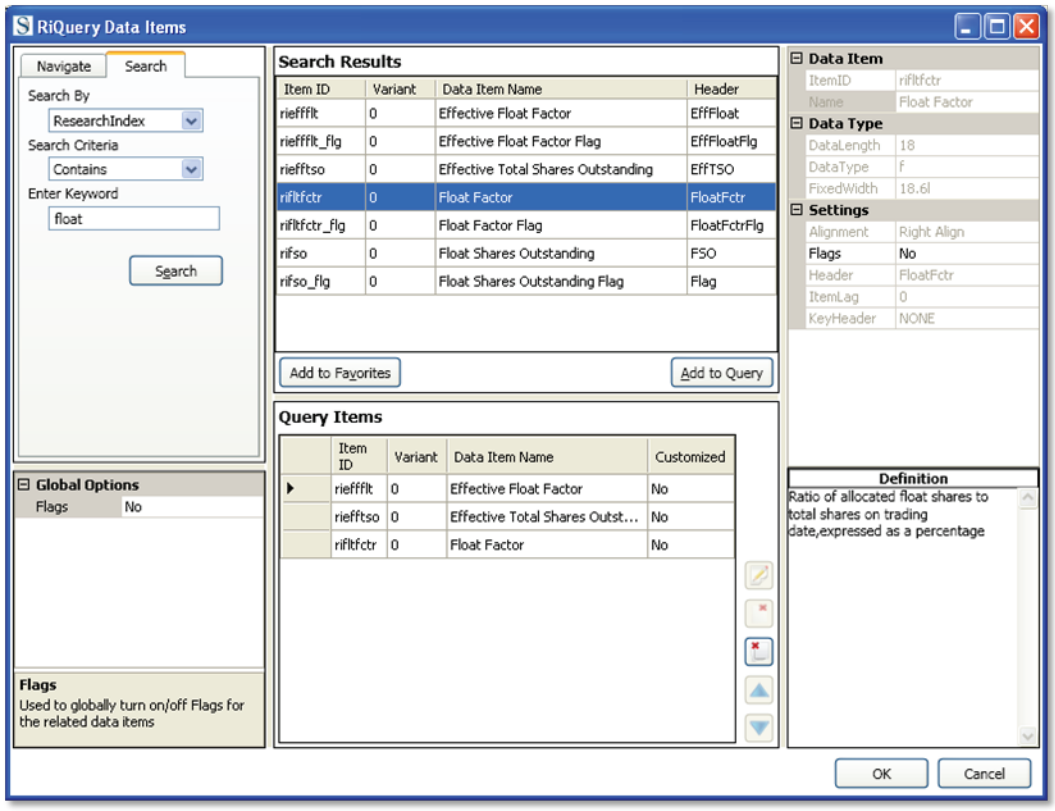
The RIQuery Data Items window is divided into several areas.



Items are divided into logical groups in the Navigate/Search area.



Clicking the name of a group causes its data items to appear in the Search Results area. Or, rather than browsing by category, click the Search tab. There you can enter a descriptive keyword (e.g., "float") to find items of interest. Browsing and searching both cause the data items found to appear in the Search Results area of the window.



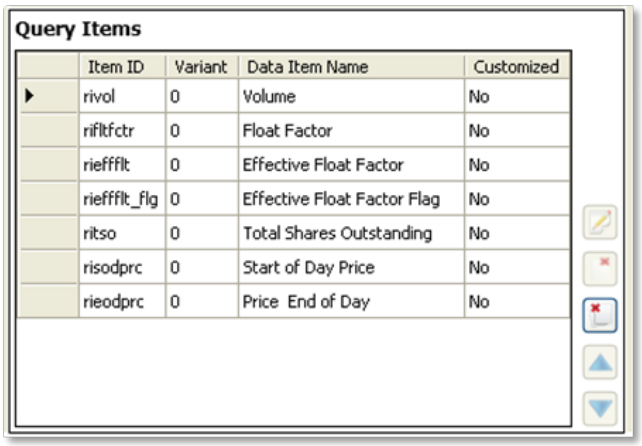
When you highlight an item in the Search Results area, its attributes and a short text description appear in the window areas to the right.

ABOUT FLAGS

Parameters in bold black text are set to default values and may be modified. In the Research Index Database, edit options are limited to the setting of Flags. Time series data items and a few others have flags associated with them. Because they are largely unpopulated, the flag items are hidden from the tree view display. Using the search function will return flag items associated with your search. To return a list of all available flag items search on "flg".

Flags can be selected as individual items through using the search screen, or can be turned on automatically for items in the query that have flag items associated with them. Individual items can have flags turned on by clicking on the Flag field in the properties panel and changing from the No default value. Flags can be turned on for all items by using the Global Options panel on the lower left hand corner of the screen and switching from the No default. Pre-defined Data Groups do not support flag items.

Select each item you want in your query, and click the Add to Query button to add it to the Query Items area below the Search Results.


Query Items
Item ID
Variant
Data Item Name
Customized
rivol 0 Volume No
rifltfctr 0 Float Factor No
riefffflt 0 Effective Float Factor No
riefffflt_flg 0 Effective Float Factor Flag No
ritso 0 Total Shares Outstanding No
risodprc 0 Start of Day Price No
rieodprc 0 Price End of Day No

Items in the Query Items area appear in the order that they will appear in your query's output. To adjust the position of an item, select it and click the blue up and down arrows to move it up or down the list. The other buttons are:

<— Edit. Click this to edit an item's attributes.

<— Remove the selected item from your query.

<— Remove all items from the Query Items list.

Click the OK button to confirm the addition of the selected items to your query. Click cancel to exit the StkQuery Data Items window without making any changes.

Import Data Item File...

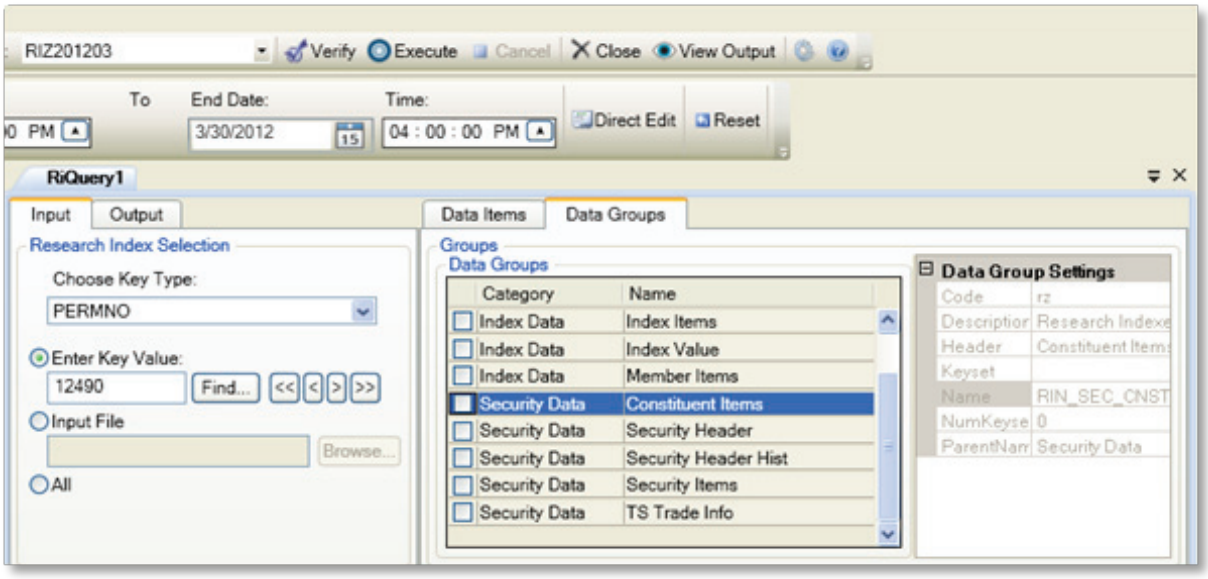
Clicking this button allows you to import a list of data items into your query from a text file.

Export to File...

Use this option to output the Selected Data Items list to a text file containing each item's mnemonic itemid. This text file may then be imported into other queries using the Import Data Item File... button.

DATA GROUPS

The Data Groups tab allows you to select related event and time series data items. Adjustment parameters applied to data groups are automatically applied to applicable items in the group. This saves you the time of selecting and adjusting items individually.



Available groups include:

INDEX DATA

- Index Header – Current identifier and descriptor items
- Index Header History – Historic record of identifiers and descriptors
- Index Items – Daily index values for index capitalization, levels, returns, counts, and more
- Member Items – Security constituent holdings, weights, float, start and end of day values
- Index Value – Second-by-second listing of index values

SECURITY DATA

- Index Constituent Data – access by security PERMNO, Index membership and holdings, weights, float, start and end of day values for each associated with each index in which security is a member.
- Security Header – Current identifiers and descriptor items
- Security Header History – Historic record of identifiers and descriptors
- Security Items – Start and end of day prices and capitalizations, volumes, returns, dividends, and more
- Time Series Trade Information –Minute- by- minute prices, volumes, cumulative volumes and trade counts
- Constituent Items – Accessible through CRSP PERMNO, for each index in which the security is a member, holdings, weights, float, start and end of day values

OUTPUT OPTIONS

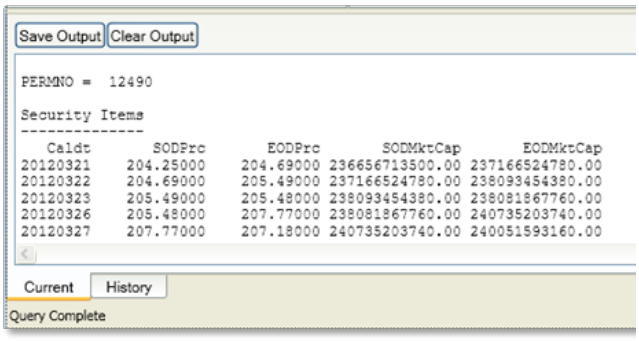
You can save the output of a RIQuery in one of several formats. Click the Output tab to show the Output Options panel.

OUTPUT TO SCREEN

The default option is text-based output, formatted to fit the screen width specified in the Width control. 80

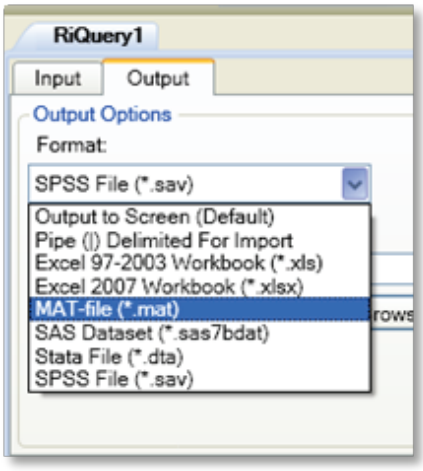
characters is the default output width.

Screen output appears in the output area at the bottom of the RiQuery window.



By default, the output of the last query execution is shown in the Current tab. The Save Output and Clear Output buttons at the top of the output area allow you to save output to a text file or to clear it away. Clicking the History tab shows you the output of every query execution since the query was opened. When you switch to the query history view, the buttons above the output area change to Save History and Clear History. Save History allows you to capture the output of an entire session. You can select a new security, or different data or options related to the same security. Each time you click Execute the new output is saved in the History tab. By clicking Save History, you can save all the output to one text file.

OUTPUT TO FILE



You can also save query output in a number of external file formats. When you choose a non-screen output format, the Output File Name field becomes active. In order to successfully execute the query, you must select a location to store the output file. Click the Browse button to do so.

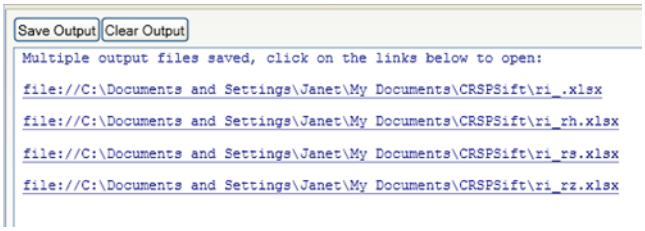
Notes about supported Formats

Pipe-deliimited ASCII text is suitable for importing into databases or software packages not directly supported by CRSPSift. This option generates a single output file.

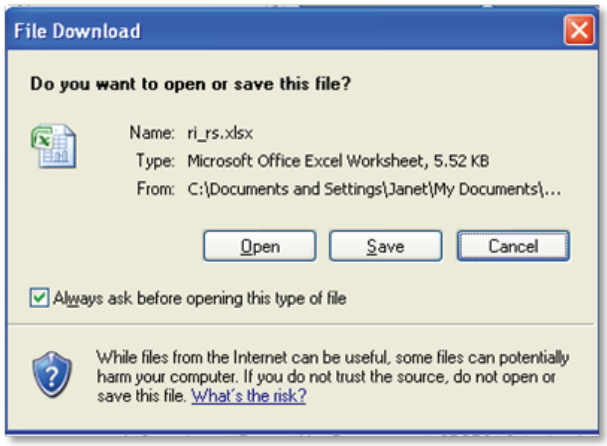
Excel 97-2003 (version 8) has a row limit of 65536 total rows. If a query generates more than that number of rows, the output will be truncated at the row limit.

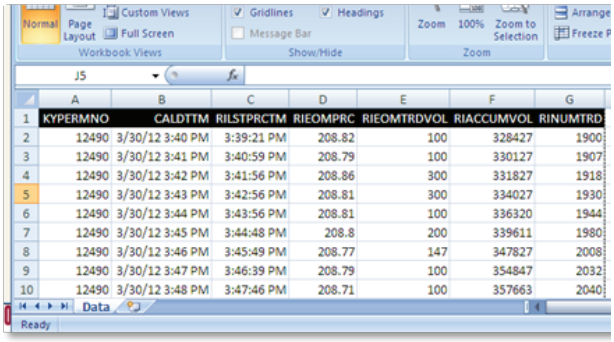
VIEWING OUTPUT FILES

With the exception of the Pipe Delimited option, if you select a non-screen output format, RIQuery will generate one or more output files, one for each unique data type layout. When the query completes execution, the hopper displays links to the files that were generated. Each file will have the name specified in the Output File Name field, with the addition of an extension identifying the type of output it contains.


Save Output
Clear Output
Multiple output files saved, click on the links below to open:
file://C:\Documents and Settings\Janet\My Documents\CRSPSift\ri_.xlsx
file://C:\Documents and Settings\Janet\My Documents\CRSPSift\ri_rh.xlsx
file://C:\Documents and Settings\Janet\My Documents\CRSPSift\ri_rs.xlsx
file://C:\Documents and Settings\Janet\My Documents\CRSPSift\ri_rz.xlsx

Clicking one of the output files links opens the File Download dialog box.

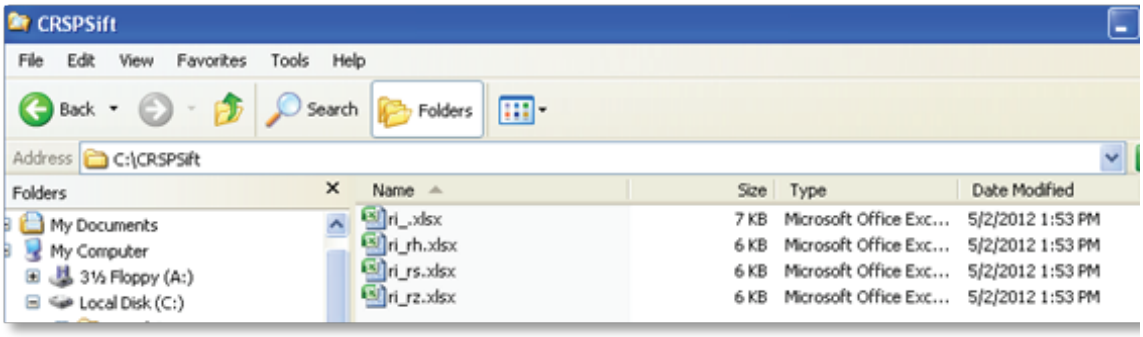

File Download
Do you want to open or save this file?
Name: ri_rs.xlsx
Type: Microsoft Office Excel Worksheet, 5.52 KB
From: C:\Documents and Settings\Janet\My Documents\...
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?



Click Open to open the output file in the appropriate application (Excel 2007, in the example shown to the left).

Alternatively, you can click the View Output button, located in the CRSPSift toolbar, to view the output files generated by your query.

If a query generated only one file, the target application will open the file directly, as shown above. If the query resulted in multiple output files, however, instead of opening the files, CRSPSift will open a Windows Explorer window showing the folder where you chose to save output.


CRSPSift
File Edit View Favorites Tools Help
Back Search Folders
Address C:\CRSPSift
Folders
My Documents
My Computer
3½ Floppy (A:)
Local Disk (C:)
Name Size Type Date Modified
ri_.xlsx 7 KB Microsoft Office Exc... 5/2/2012 1:53 PM
ri_rh.xlsx 6 KB Microsoft Office Exc... 5/2/2012 1:53 PM
ri_rs.xlsx 6 KB Microsoft Office Exc... 5/2/2012 1:53 PM
ri_rz.xlsx 6 KB Microsoft Office Exc... 5/2/2012 1:53 PM

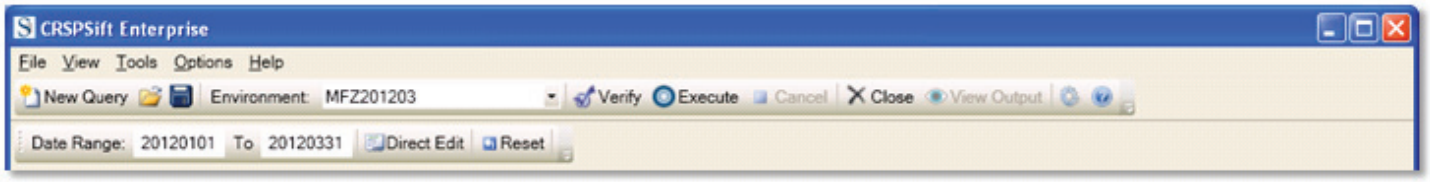
OUTPUT FILE SUFFIXES

The following table lists output file suffixes and the type of data they indicate is contained in a file.

DATA TYPE	SUFFIX
Index Header	rh
Index Header History	rj
Index Daily Items	rx
Index Values (second by second)	ri
Index Member Daily Items (access by INDNO)	rc
Security Header	rs
Security Header History	rt
Security Daily Items	ry
Security Time Series Trade Detail (minute by minute)	rv
Index Constituent Daily Data Items (access by PERMNO)	rz

CHAPTER 9: MUTQUERY: US SURVIVOR-BIAS-FREE MUTUAL FUND DATABASE ACCESS

MutQuery is used to extract data from the CRSP US Survivor-Bias-Free Mutual Funds Database. Access is designed for Fund data, cross-referencing securities with funds, and for holdings company information. A subsequent release of Sift will also allow for getting to fund information through a security. Locate the MutQuery toolbar below the main CRSPSift toolbar.

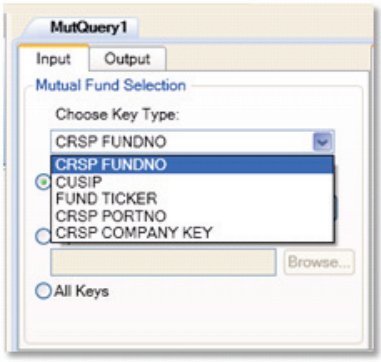


The menu bar for MutQuery is like that of most other Sift tools. The default date range is set for the most recent three months up through the end date of the database. Specify a date range by entering any one of the following formats: YYYYMMDD, YYYYMM, or YYYY. The following table provides examples of how to use the various formats.

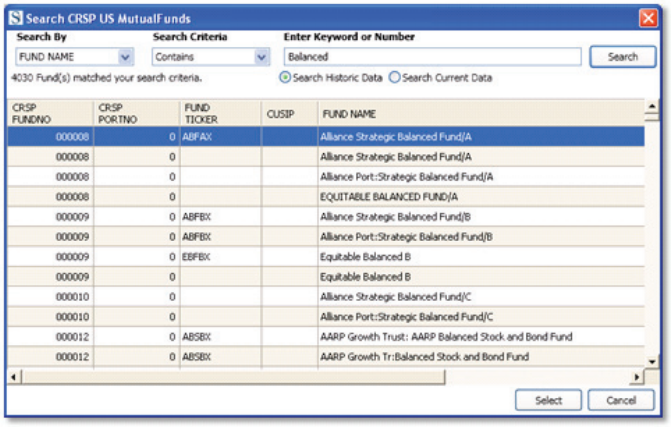
START	END	RESULT
199609	199612	all data from the beginning of September through December of 1996
1990	(empty)	all data in the year 1990
1994	19940615	all data from the beginning of 1994 until June 15, 1994
19961231	(empty)	data only on the date December 31, 1996

SECURITY SELECTION

From the Choose Selection Type drop-down menu in the Mutual Fund Selection area, specify the key, such as CRSP FUNDNO or CRSP COMPANY KEY, for use in your query. In the next version of Sift, the key type that you select will limit your data item selection to those items that are relevant to the key.



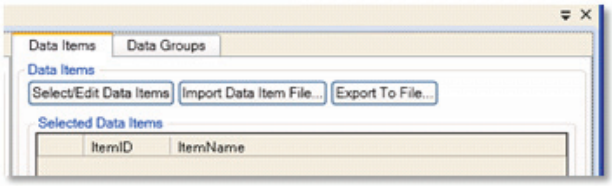
Next, identify the issue or issues of interest. If you know an identifier, you can enter it directly. If you do not know an identifier, click the Find... button to open the Search window. Searches for data in the Mutual Funds Database are limited to CRSP FUNDNO, CRSP PORTNO, and CRSP COMPANY KEY for use as primary key selections.


Search CRSP US MutualFunds
Search By
Search Criteria
Enter Keyword or Number
FUND NAME
Contains
Balanced
Search
4030 Fund(s) matched your search criteria.
Search Historic Data
Search Current Data
CRSP FUNDNO
CRSP PORTNO
FUND TICKER
CUSIP
FUND NAME
000008 0 ABFAX Alliance Strategic Balanced Fund/A
000008 0 Alliance Strategic Balanced Fund/A
000008 0 Alliance Port:Strategic Balanced Fund/A
000008 0 EQUITABLE BALANCED FUND/A
000009 0 ABFBX Alliance Strategic Balanced Fund/B
000009 0 ABFBX Alliance Port:Strategic Balanced Fund/B
000009 0 EBFBX Equitable Balanced B
000009 0 Equitable Balanced B
000010 0 Alliance Strategic Balanced Fund/C
000010 0 Alliance Port:Strategic Balanced Fund/C
000012 0 ABSBX AARP Growth Trust: AARP Balanced Stock and Bond Fund
000012 0 ABSBX AARP Growth Tr:Balanced Stock and Bond Fund
Select
Cancel

Use the search form to locate a particular fund, portfolio, or company in the database. Results of your search criteria appear in a table, initially sorted by key – FUNDNO for funds and portfolios, and CRSP COMPANY KEY for securities. If your search yields many matches, click the column labels to resort the table in the order most useful to you. When you have found the entity that you want, click its row in the table, and then click the Select button. The key of that entity will appear in the identifier field.

You may also choose to access all issues in the database, or issues you specify in an input file. To search all issues, click All Issues in the Mutual Fund Selection area. To use an input file, create a plain text file with an entry for each issue, one per row, using the active key of your choice. Select the key type that from the Active Key menu that corresponds to that used in your input file and click Input on File. Click the Browse... button to locate the file you created.

DATA ITEMS

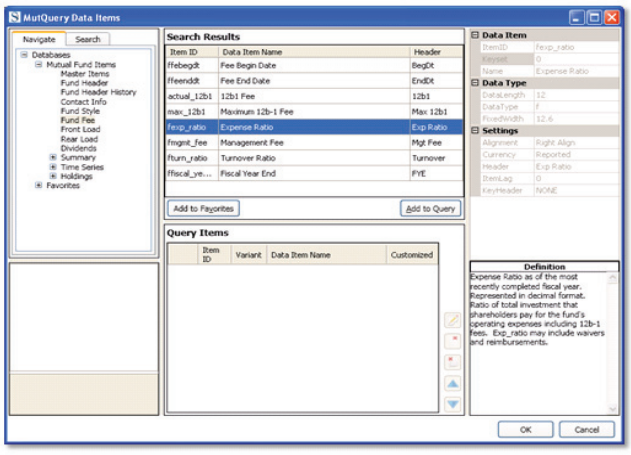


Data can be selected as either individual items going through the Data Items tab, or as preselected groups of logically categorized data by using the Data Groups tab.

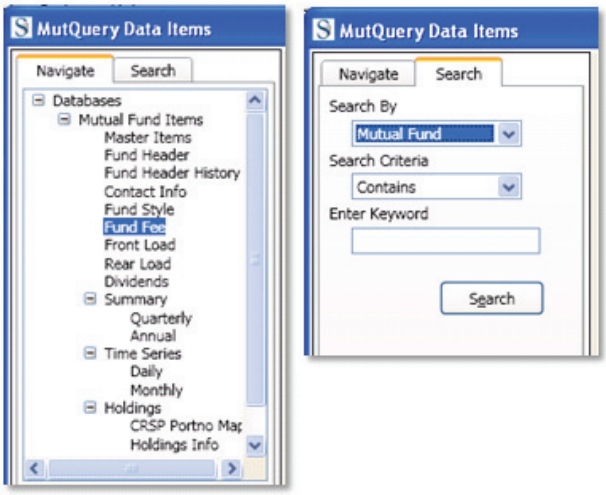
SELECT/EDIT DATA ITEMS

Clicking on the Select/Edit Data Items tab launches the interface for selecting individual items in MutQuery.

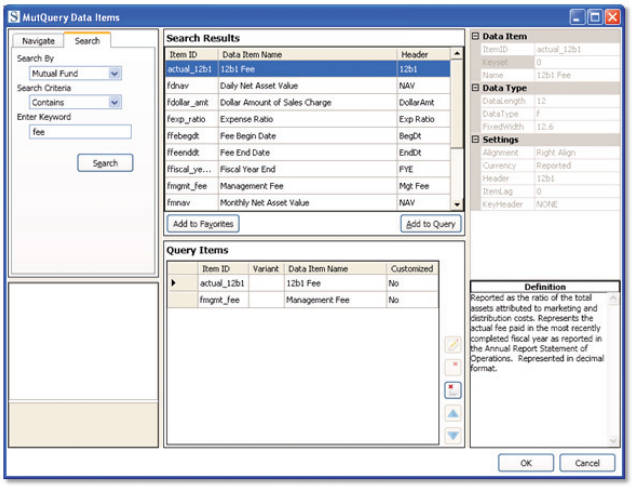
The MutQuery Data Items window is divided into several areas.



Items are divided into logical groups in the Navigate/ Search area.



Clicking the name of a group causes its data items to appear in the Search Results area. Or, rather than browsing by category, click the Search tab. There you can enter a descriptive keyword (e.g., "fee") to find items of interest. Browsing and searching result in data items appearing in the Search Results area of the window.



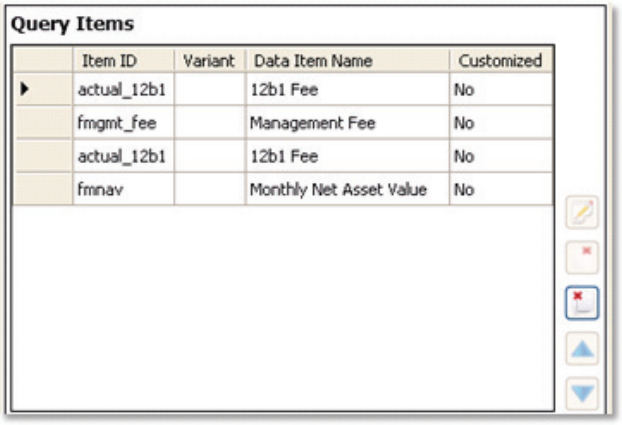
Note:

A future version of the Mutual Funds database will allow for context when selecting items. Depending on the access key that is selected – FUNDNO, PORTNO, or COMPANY KEY, only those categories of data items that are applicable to the key will be available for selection.

Important to note for this release, COMPANY KEY access is limited to the Company Info Category located under Holdings. Through PORTNO, access is available for Holdings detail data. FUNDNO allows acces to all mutual funds items, summary data, time series, and Portno mappings.

When you highlight an item in the Search Results area, its attributes and a short text description appear in the window areas to the right.

Select each item you want in your query, and click the Add to Query button to add it to the Query Items area below the Search Results.



Items in the Query Items area appear in the order that they will appear in your query's output. To adjust the position of an item, select it and click the blue up and down arrows to move it up or down the list. The other buttons are:

Edit. Click this to edit an item's attributes.

Remove the selected item from your query.

Remove all items from the Query Items list.

Click the OK button to confirm the addition of the selected items to your query. Click cancel to exit the MutQuery Data Items window without making any changes.

Import Data Item File...

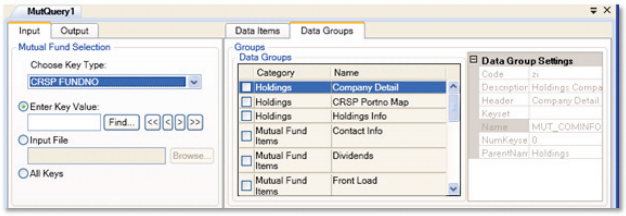
Clicking this button allows you to import a list of data items into your query from a text file.

Export to File...

Use this option to output the Selected Data Items list to a text file containing each item's mnemonic itemid. This text file may then be imported into other queries using the Import Data Item File... button.

DATA GROUPS

The Data Groups tab allows you to select clusters of related event and time series data items.



Available groups include:

Mutual Fund Data

- Contact Information – Management Company contact information
- Dividends – Distribution type and amount, reinvestment NAV history
- Front Load – Load amount, percentage, relevant date ranges
- Fund Fee – Fees and ratios history
- Fund Header – Descriptors and flags, Manager, Advisor
- Fund Header History – History of Descriptors and flags, Manager, Advisor
- Fund Style – Flags and classification codes
- Master Items – Identifier codes, date ranges for daily and monthly data
- Rear Load – Load type, dollar amount, withdrawal fees data
- Annual and Quarterly Summary – Snapshots of fund performance-related data, Fund makeup by percentage
- Daily and Monthly Time Series – Daily NAVs and returns, Monthly NAVs, TNA, returns
- CRSP Portno Map – Identifier mapping of portfolios associated with a fund with begin and end dates

Portfolio Data

- Holdings Detail – Listing of fund holdings, their ranks within the fund, market value, shares held, % of fund TNA

Company Data

- Company Information - Security identifiers, non-equity coupon rates and maturity dates

OUTPUT OPTIONS

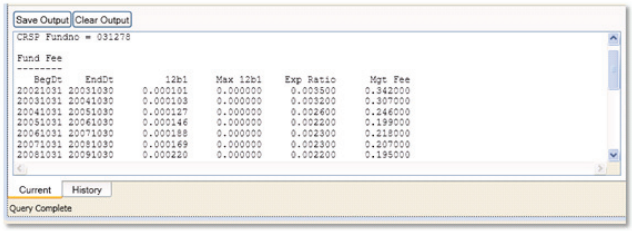
You can save the output of a MutQuery in one of several formats. Click the Output tab to show the Output Options panel.

OUTPUT TO SCREEN

The default option is text-based output, formatted to fit the screen width specified in the Width control. 80 characters is the default output width.

> *Helpful Hint:*
> *Many queries on the mutual funds database can result in large files. Consider output format when extracting data. The screen default is appropriate for individual funds. Excel 2007 will be acceptable for many queries, but any query that is extracting a large universe of funds over a long date range will quickly exceed Excel row limits. SAS is CRSP's recommended output format for large query results.*

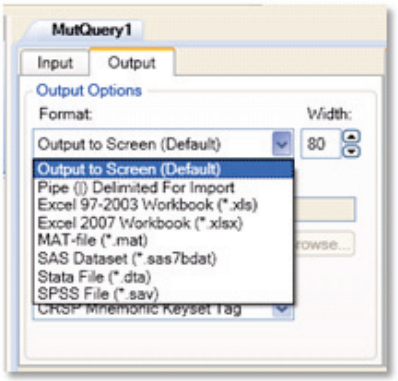
Screen output appears in the output area at the bottom of the MutQuery window.



By default, the output of the last query execution is shown in the Current tab. The Save Output and Clear Output buttons at the top of the output area allow you to save output to a text file or to clear it away. Clicking the History tab shows you the output of every query execution since the query was opened. When you switch to the query history view, the buttons above the output area change to Save History and Clear History. Save History allows you to capture the output of an entire session. You can select a new security, or different data or options related to the same security. Each time you click Execute the new output is saved in the History tab. By clicking Save History, you can save all the output to one text file.

OUTPUT TO FILE

You can also save query output in a number of external file formats. When you choose a non-screen output format, the Output File Name field becomes active. In order to successfully execute the query, you must select a location to store the output file. Click the Browse button to do so.



Notes about supported Formats

Many queries on the mutual funds database result in large files. Consider output format when extracting data.

The screen default is appropriate for individual funds.

Pipe-deliimited ASCII text is suitable for importing into databases or software packages not directly supported by CRSPSift. This option generates a single output file.

Excel 97-2003 (version 8) has a row limit of 65536 total rows. If a query generates more than that number of rows, the output will be truncated at the row limit.

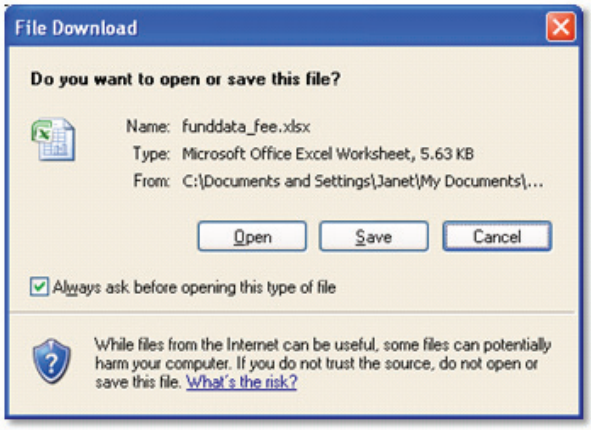
Excel 2007 will be acceptable for many queries, but any query that is extracting a large universe of funds over a long date range will quickly exceed Excel row limits and will truncate the results. SAS is CRSP's recommended output format for large query results.

VIEWING OUTPUT FILES

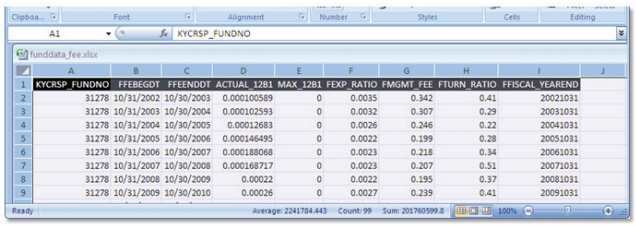
With the exception of the Pipe Delimited option, if you select a non-screen output format, MutQuery will generate one or more output files, one for each unique data type layout. When the query completes execution, the hopper displays links to the files that

were generated. Each file will have the name specified in the Output File Name field, with the addition of an extension identifying the type of output it contains.

Clicking one of the output files links opens the File Download dialog box.


File Download
Do you want to open or save this file?
Name: funddata_fee.xlsx
Type: Microsoft Office Excel Worksheet, 5.63 KB
From: C:\Documents and Settings\Janet\My Documents\...
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

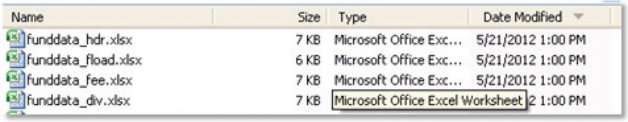
Click Open to open the output file in the appropriate application (Excel 2007, in the example shown below).



KYCRSP_FUNDNO	FFEBEGDT	FFEENDDT	ACTUAL_12B1	MAX_12B1	FEXP_RATIO	FMGMT_FEE	FTURN_RATIO	FFISCAL_YEAREND
31278	10/31/2002	10/30/2003	0.000100589	0	0.0035	0.342	0.41	20021031
31278	10/31/2003	10/30/2004	0.000102593	0	0.0032	0.307	0.29	20031031
31278	10/31/2004	10/30/2005	0.00012683	0	0.0026	0.246	0.22	20041031
31278	10/31/2005	10/30/2006	0.000146495	0	0.0022	0.199	0.28	20051031
31278	10/31/2006	10/30/2007	0.000188068	0	0.0023	0.218	0.34	20061031
31278	10/31/2007	10/30/2008	0.000168717	0	0.0023	0.207	0.51	20071031
31278	10/31/2008	10/30/2009	0.00022	0	0.0022	0.195	0.37	20081031
31278	10/31/2009	10/30/2010	0.00026	0	0.0027	0.239	0.41	20091031

Alternatively, you can click the View Output button, located in the CRSPSift toolbar, to view the output files generated by your query.

If a query generated only one file, the target application will open the file directly, as shown above. If the query resulted in multiple output files, however, instead of opening the files, CRSPSift will open a Windows Explorer window showing the folder where you chose to save output.


Name
Size
Type
Date Modified
funddata_hdr.xlsx 7 KB Microsoft Office Exc... 5/21/2012 1:00 PM
funddata_fload.xlsx 6 KB Microsoft Office Exc... 5/21/2012 1:00 PM
funddata_fee.xlsx 7 KB Microsoft Office Exc... 5/21/2012 1:00 PM
funddata_div.xlsx 7 KB Microsoft Office Excel Worksheet 2 1:00 PM

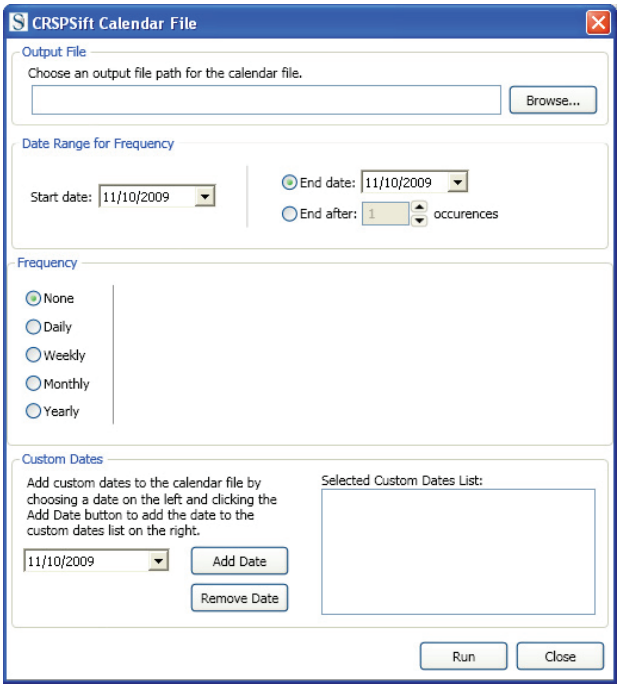
OUTPUT FILE SUFFIXES

The following table lists output file suffixes and the type of data they indicate is contained in a file.

DATA TYPE	SUFFIX
Master Items	mast
Header	hdr
Header History	hist
Contact Information	cntct
Fund Style	sty
Fund Fee	fee
Front Load	fload
Rear Load	rload
Dividends	div
Quarterly Summary	qtr_sm
Annual Summary	ann_sm
Daily Times Series	dly_ts
Monthly Time Series	mth_ts
CRSP Portno Map	portmap
Holdings Information	hld
Company Detail	cominfo

CALENDAR FILE WIZARD

When using TsQuery, you can define your own set of dates, or you can select one of several predefined calendars. To create a custom calendar with only those dates of interest to you, select "Calendar File..." from the Tools menu.

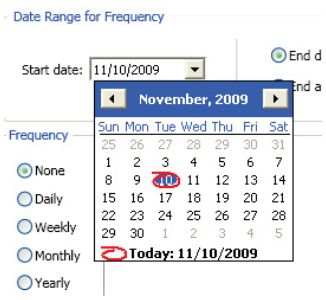


CALENDAR OUTPUT FILE

In the Calendar File window, first specify a location to save the file. Type a path into the Output File text box, or click Browse... to navigate to the desired directory.

DATE RANGE FOR FREQUENCY

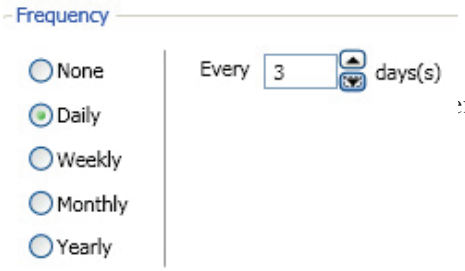
Next, define the custom calendar's frequency and the date range for the frequency. In the Date Range for Frequency area, click the start date menu and select a date from the popup calendar.



Then either specify an end date in the same manner, or choose to end after a certain number of occurrences. "Occurrences" refers to the frequency you define in the Frequency area below. For example, say you define a weekly frequency recurring on Wednesdays, and choose to end after twelve occurrences. The query report will include data only from the twelve Wednesdays subsequent to the start date you specified.

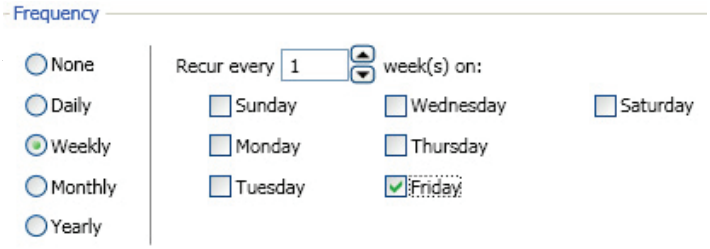
FREQUENCY

With the date range in place, define the frequency of dates your query will access. In the Frequency area, select a frequency from the list at the left. If your query will use only individual dates with no regular interval, select None. You can then select those dates in the Custom Dates area below the Frequency area. If your query's calendar will have some regular frequency, select one of the other options: Daily, Weekly, Monthly, or Yearly. When you select one, controls appear to the right allowing you to customize the frequency. Customization options are as follows.



ndar, e.g., every day,

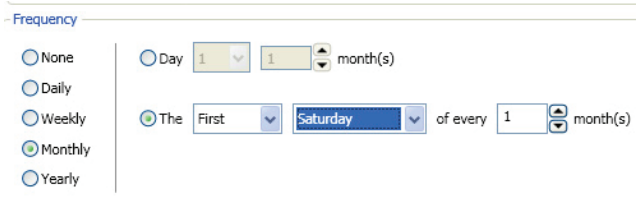
Weekly



Monthly

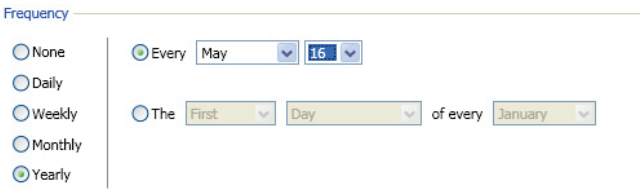
A monthly frequency provides two options. One is to select the frequency of months and specify which day of the month to include, for instance, the tenth day of every other month.

The other also allows you specify the frequency of months, the type of day to include (e.g., Weekday, Weekend Day, or Thursday), and when that day occurs in the month (e.g., Third or Last). For example, a calendar might specify the second weekend day of every month, or the last Thursday of every third month.



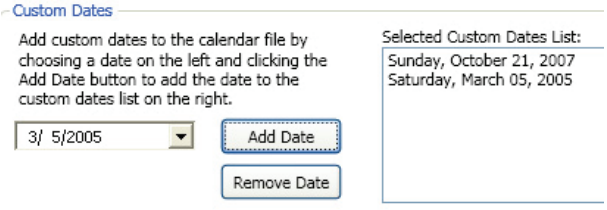
Yearly

The yearly frequency offers options similar to those of the monthly. A calendar might include March 3rd of every year, or the first weekend day in January of every year.



CUSTOM DATES

In addition to, or in place of, a specified frequency, a calendar can include specific custom dates. To add specific dates, click the menu on the left in the Custom Dates area. Use the popup calendar control to find and select a date, and then click the Add Date button to add it to the list on the right. To remove a date from the list, click the Remove Date button.


Custom Dates
Add custom dates to the calendar file by choosing a date on the left and clicking the Add Date button to add the date to the custom dates list on the right.
3/ 5/2005
Add Date
Remove Date
Selected Custom Dates List:
Sunday, October 21, 2007
Saturday, March 05, 2005

When you are finished defining a custom calendar, click the Run button at the bottom of the Calendar File window to create the file. If you would like to view the generated file, click the View File button in the dialog box that appears. If not, click the Done button. The calendar file is now saved in the location you specified. To use your custom calendar with TsQuery, click on the Calendar File radio button on the Date tab, browse to the location of your calendar file, and enter the full path and filename. Other date options on this tab are superceded by the Calendar File option. To dismiss the Calendar File window, click the Close button.

REFERENCE DATA

CRSP STOCK AND INDEX DATA

CRSPSift features built-in reference tables describing data codes and their values. References can be found under References in the Tools menu. When selected, tables appear as floating panels. These panels can be positioned to the side of the main CRSPSift window or docked to the window. See the Docking section below for more information.

The following reference tables are available in CRSPSift for CRSP Stock and Index data:

- Delisting Codes
- Distribution Codes
- Missing Return Codes
- NASD Index Code
- NASDAQ National Market Indicator
- NASDAQ Status Code
- North American Security Exchange and Index Codes
- Security Status and Valid Exchanges

The information in these tables can also be found in Chapter 5 of the *Data Description Guide: Data Coding Schemes.*

COMPUSTAT XPRESSFEED DATA

The following references are available in CRSPSift for CCM:

- Reference Codes
- Reference Numbers
- Currency & Exchange Rates
- Economic Indicators

Reference Codes and Reference Numbers explain codes found in program output. Currency & Exchange Rates and Economic Indicator data can be displayed within the reference panel or output to a variety of file formats, including Excel, SAS, and Matlab.

CCM Link References include tables identifying codes found in the tables generated by CRSP in the process of linking CRSP and Compustat company and security-level identifiers. All Reference tables associated with CCM require a valid data environment that includes a full CCM database.

CRSP TREASURIES DATA

The following reference tables are available in CRSPSift for CRSP Treasuries data:

- First Coupon Payment Date
- Name of Government Security
- Number of Interest Payments per Year
- Payment of Estate Tax Code
- Source Daily
- Source Monthly

CRSP MUTUAL FUNDS

CRSP Mutual Funds reference tables are available in CRSPSift for:

- Delisting Codes
- Lipper Asset Codes
- Rear Load Type
- Policy
- Wisenberger Objective Codes

Additional tables and reference information can be found in the Appendices at the end of the *CRSP US Survivor-Bias-Free Mutual Fund Database Guide.*

RESEARCH INDEX DATABASE

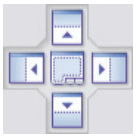
The following reference tables are available in CRSPSift for the Research Index Database:

- Holding Type
- Organization Type
- Price Source
- Primary Exchange
- Security Status
- Share Change Type
- Share Type
- Size Band Label
- Trading Status

DOCKING SUB-WINDOWS

Sub-windows in CRSPSift, such as the Batch Queries window and the new Stock and CCM References, can be "docked" within the main application window. To dock a window click and drag it by its title bar. For instance, the Stock Reference title bar:

As you drag the window, the following five icons appear:



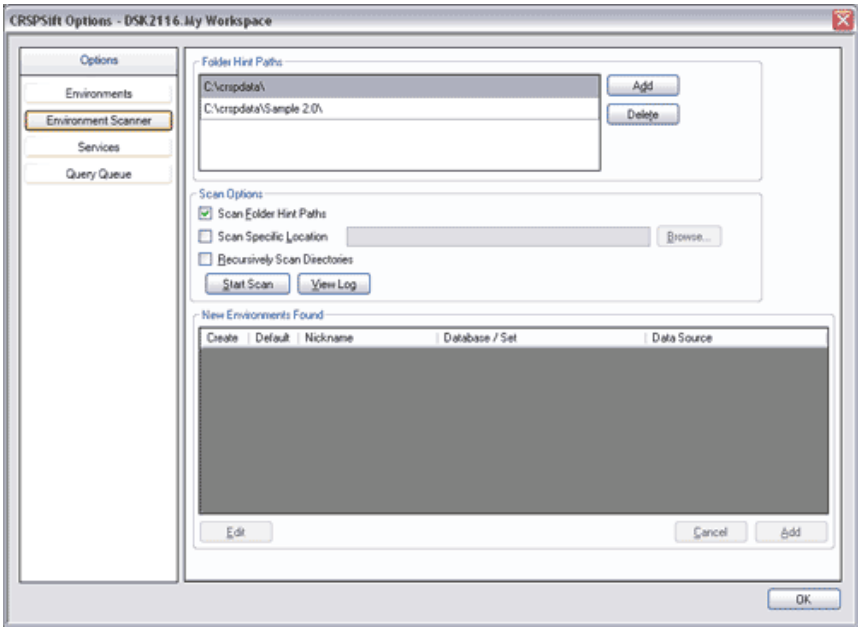
The triangle on each outer icon indicates where in the CRSPSift window the window will be docked with respect to the query area, left, right, above, or below. Drag the window's title bar over the desired icon to dock it in the desired location. Dragging a window over the central icon will cause the window to appear as a tab in the queries area.

CRSPSIFT OPTIONS - ENVIRONMENT SCANNER

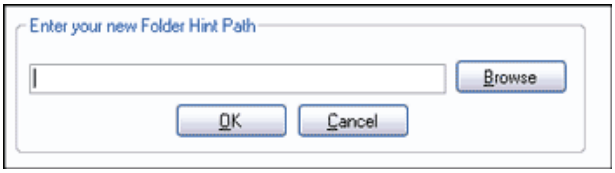
Use the Environment Scanner tool search your computer for CRSP databases and automatically combine them into valid environments.

FOLDER HINT PATHS

By default, the Environment Scanner looks for databases in a set of pre-defined locations, called Folder Hint Paths. The Folder Hint Paths provided with CRSPSift are C:\crspdata (the default install location for CRSP databases) and C:\crspdata\Sample 3.21 (the location of the sample datasets provided with the CRSPSift software). Each time CRSPSift launches, the Folder Hint Paths are search for newly installed databases. When new databases are found by the Scanner, any valid environments based on those databases are presented to you to select and add to CRSPSift.



If your databases are installed outside the default locations, you can add your own Folder Hint Paths to guide the Environment Scanner's search. Click the Add button next to the list of paths. Next click the Browse button and choose the directory where you would like the Scanner to search for databases. Click OK to add the directory to the list.



To delete a Folder Hint Path, select it from the list and click the Delete button.

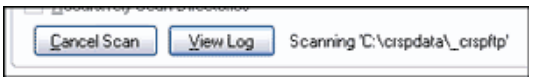
SCAN OPTIONS

The Environment Scanner's Scan Options allow you to fine tune how its scan is performed. The default behavior for the Scanner is to search defined Folder Hint Paths, scanning the top level of those folders for valid databases.

If you would like to search a directory without adding it to the list of Folder Hint Paths, click the Scan Specific Location checkbox and then the Browse button to locate it.

SCANNING

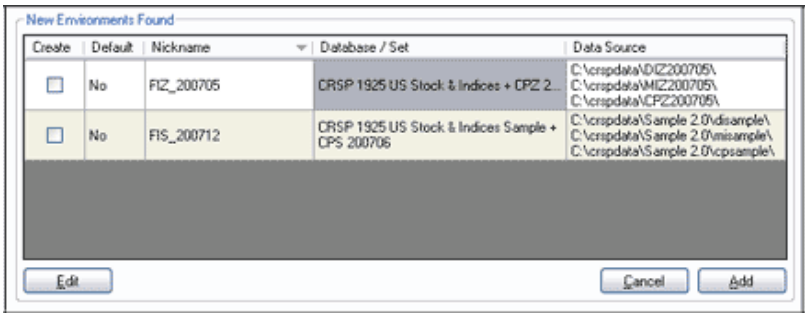
After setting the appropriate Scan Options, click the Start Scan button to activate the Environment Scanner. When the scan begins, the Start Scan button is replaced with the Cancel Scan button. Click this button at any time during the process to halt the scan.



The time it takes for a scan to complete depends on the number of directories scanned.

NEW ENVIRONMENTS FOUND

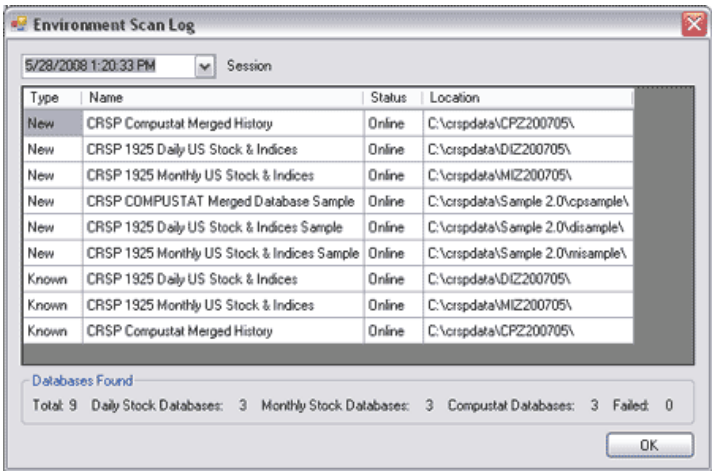
When the Environment Scanner completes its search, any new, valid environments it discovered are displayed in the New Environments Found table at the bottom of the screen. Each environment displays its attributes, such as its default nickname, full dataset name, and the folder paths of the databases it includes.



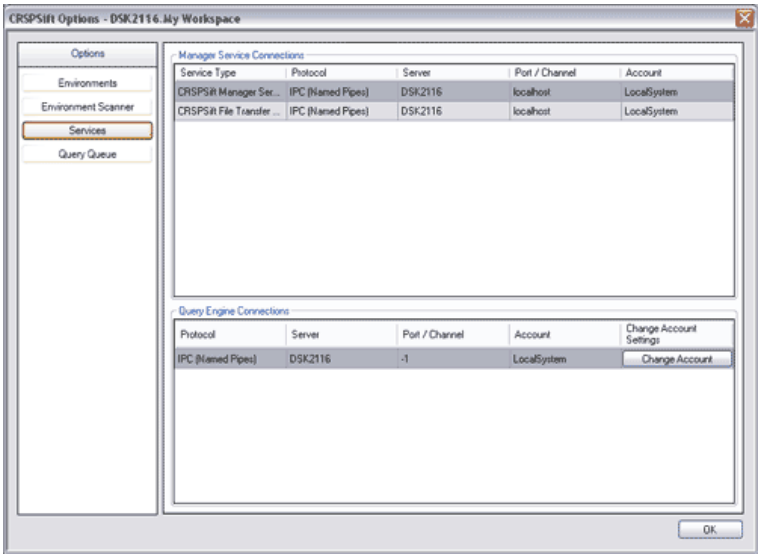
To add a discovered environments to CRSPSift, click the Create checkbox in its row. If you would like to modify the environment's settings before adding it, click the Edit button. See the discussion of CRSPSift Environments for details on how environment editing options. When you are satisfied with the environment, click the Add button. The new environment will now be available for use by CRSPSift query tools.

THE ENVIRONMENT SCAN LOG

To see a log of the databases found by the Environment Scanner, click the View Log button in the Scan Options area. The Environment Scan Log maintains a list of the databases discovered in each run of the Environment Scanner. The log of the most recent session is shown by default. To view a previous session, select a date and time from the Session drop-down menu.



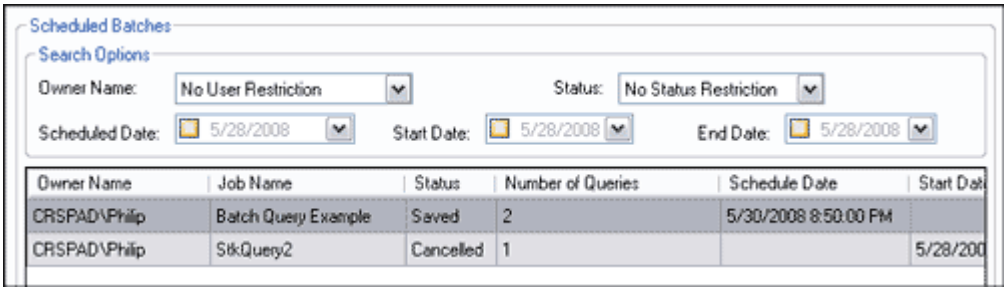
CRSPSIFT OPTIONS - SERVICES



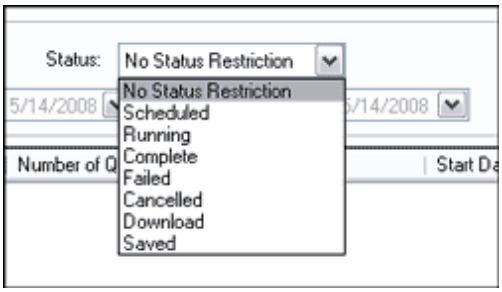
The Services Options screen displays technical information about various subsystems of the CRSPSift application, including Manager Service and Query Engine connections. The only editable feature is the Query Engine Connection Account.

CRSPSIFT OPTIONS - QUERY QUEUE

The Query Queue lists and displays details for all batch queries, as well as any open standalone queries that have been executed at least once during the current CRSPSift session.

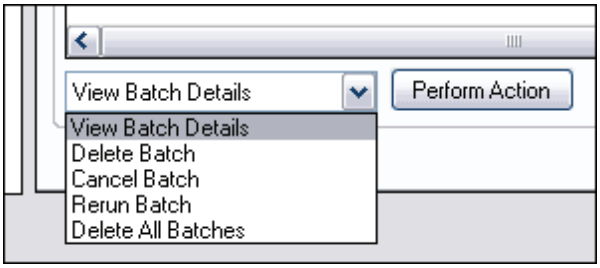


SEARCHING FOR BATCH QUERIES



Using the search options, you can filter the list to display only those queries that match certain criteria, including query owner name and query status, as well as the dates relating to when a query is scheduled to execute, when it started execution, and when execution ended.

MANAGING BATCH QUERIES



A drop-down menu at the bottom left of the Query Queue screen contains actions that you can perform on a batch query.